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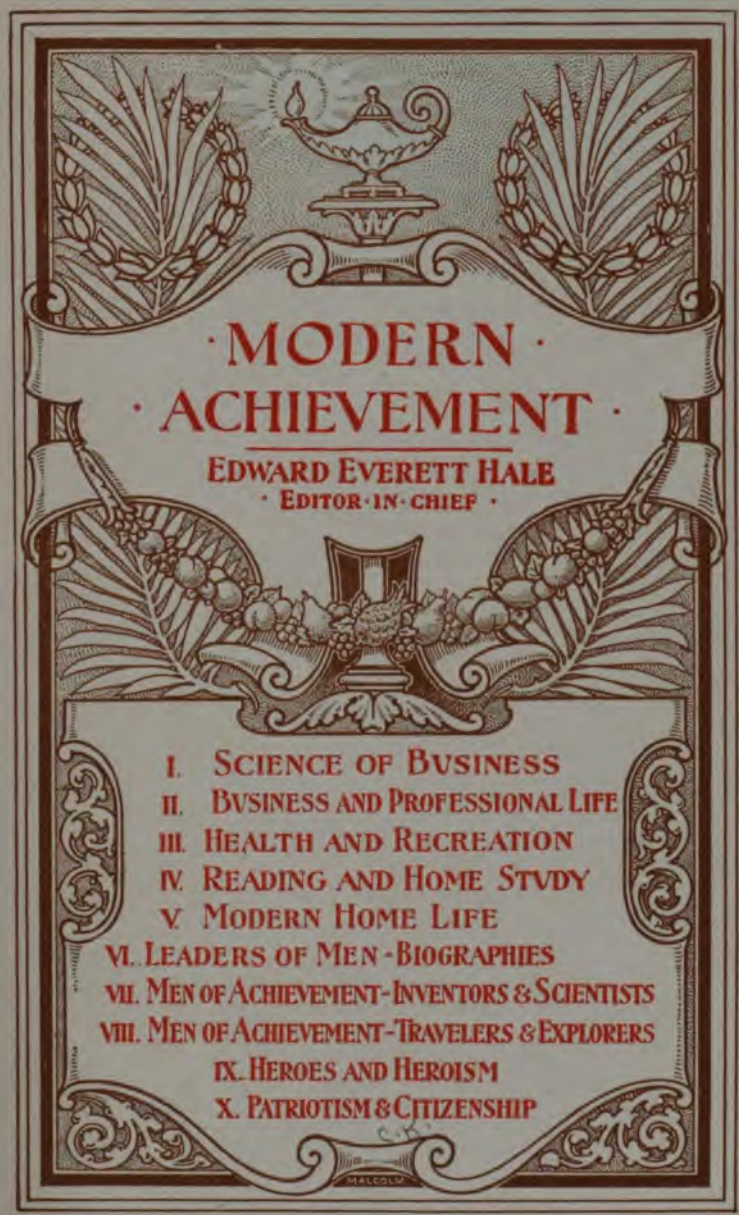

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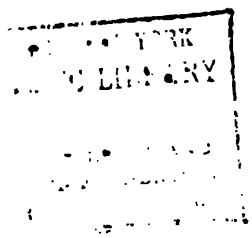

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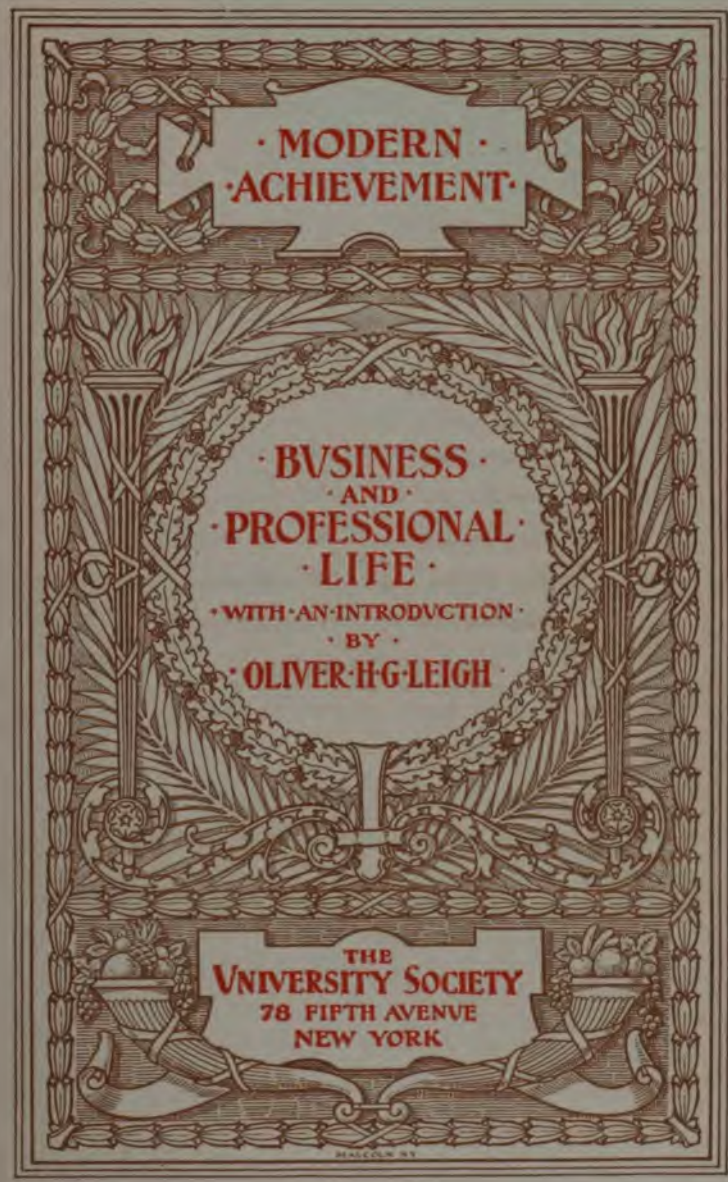
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INTRODUCTION

WHOSE shall be the final decision? A boy reads a tale of the sea and forthwith scorns the idea that he shall fit himself for the headship of his father's established business. Devoted parents plan a ministerial career for their child of promise, who develops a perverse infatuation for one of the fine-sounding art fads that yield little shadowy fame and less substance. So often do the best-laid schemes and dreams, of youth and maturity, sail the wrong way and vanish as beautiful bubbles. Even when both are of one mind, an unforeseen influence wheels the helm round and the young voyager lands where he never expected to go.

A distinguished judge of the highest court in England was apprenticed to a provincial hatter. One of the ablest jurists and statesmen now living began life as a civil engineer. The son of a poor foreign peddler became a cabinet minister, then Lord Chancellor, and he died in Washington while acting as the British commissioner on the Bering Sea arbitration. Moody, the evangelist, was first a shoe salesman. Darwin was destined for the church. A well-placed clergyman of varied gifts regretted he had not been made a ballet-master, dancing being almost a passion with him and he was a natural expert. The Speaker of the House of Commons is proud of his descent from a famous pugilist, though he preferred to carry on the fighting business with tongue instead of fists, with a law court for prize ring. Our own country abounds with instances of brilliant careers that began by running off the track on which they had so jubilantly, but mistakenly, started.

These, and similar cases, are usually cited as illustrations of what passes for genius, or the spirit of push. They seem rather to be disregarded warnings to parents and young folks against the common blunder of supposing themselves wiser than, in the nature of things, it is likely that they are. Even little children learn wisdom in eating by blowing cold on experimental spoonfuls, but years often bring remarkable rashness in gulping down foretastes of experience too hot to be endured. There undoubtedly are cases that clearly indicate the career to be chosen, the only possible one for the aptitudes strongly manifested, but a Mozart is not found in every household. Where nature points the way we have simply to pursue it. When the growing boy or girl begins to develop fancies, rising into strong hankerings for this or that calling, the worldly-wise adult friends of Young Hopeful will do well to allure him or her into other paths, unobtrusively and without running down the fad of the moment. Young persons who read this will, of course, take the hint for themselves, as forbearingly as "sweet seventeen" receives all advice, if it does not quite accept it.

Instead of one, give five, or ten, choices to the eager aspirant for success, but give them gradually and in ample time to fairly test his fitness for judging his own tastes and powers. So many half-failures, misfits, and broken careers have resulted from immature decisions on half-knowledge at the critical turn in life.

Bitter have been the heart-burnings in a million households these fifty years over the alternatives of a trade or a profession. Burnings of ambition, burnings of disappointment, coming too late to be cured.

Unpalatable it may be as a morsel for the tongue, but it is good to digest, this bit of simple common sense which reminds us that honest handicraft is as noble, every whit, as any of the self-trumpeting professions that swell out with a capital P. The wheel of fashion, in things of the mind as of material things, goes surely round with the sun, and we shall come back to the wholesomer view of life, that of past days when every maker and fashioner of every object

of utility and beauty, in song and music, in wood, metal, and stone, proudly gave their best to their loved cathedral as it rose to the glory of great ideals, and the humblest handiwork of seamstress and woodcarver was as honored as the offerings of artists and penmen, in the then general appreciation of worthy work well done for the common good. After all, a "learned profession" is only an industry carried on with another set of organs than those used to keep us alive. It is a trade in talents not particularly or essentially higher than what are needed to make a garment or a chair soundly and with true art.

There are delusions in the air which badly interfere with many a well-begun career. The delusion of "genius" is one, the mother of a brood of mischievous disappointments. A profession is tempting because it is genteel, it allows an easy time, it leads upward in the social scale. These notions, unchecked, might easily lead to a career of adventure, but the youth with his wits about him will forecast the perils of a shallow decision. He knows already, or if not these volumes will fully convince him, that the genius of success, nine times out of ten, is a development and not a ready-made silver spoon in the infant's mouth. And the personal experiences gathered in these volumes demonstrate with a force which shatters these latter-day delusions, that a vast proportion of the strongest men of this and the last generation, strong in brain, in character, in original creative power and in the genius which lifts our life to a higher plane of solid happiness, have been boys who knuckled down to all sorts of hard handiwork. It is worth while for parents and young folks to give candid second thought to this matter of choice between a possibly lean profession and a flourishing trade.

What is a career? First, of course, it is a mode of livelihood. Crowning that, it is, or should be, making oneself an influence for good, beginning in the region round about us and, if that is too small for our greatness, then we may spread over the circle of the city, state, and nation. The duty nearest hand is to insure success in the attainment of

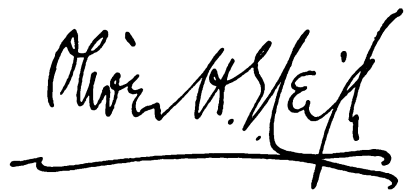
independence, which is the only power that runs the larger machinery of influence. Independence in one's sphere of work, independence enough of mind to do one's own thinking, to steer one's own craft, and to select and put boundaries to one's proper ambition.

There is, perhaps, an element of weakness in the prevalent habit of urging the young beginner to model himself upon the examples and precepts of particular men who have achieved something. Circumstances alter cases; temperaments differ; one man's methods would be all wrong if the conditions were changed. The broad rules of everyday life apply everywhere, and are almost instinctively understood from childhood. Many of the maxims held aloft for the guidance of youth are open to criticism as taking only an incomplete, sometimes a one-sided, view of the subject. Among the chief factors of a successful career the capacity to take broad views ranks very high. The young man setting out on his life-work has nowadays great need of the kind of culture which is not always supplied, nor started, in the schooling that is too generally mistaken for education. As soon as he finds out that his career-education just begins the day after he is done with his school and college grinding, he is on the highroad to the larger success. But then he has to choose not only which of the footpaths he will follow, but what mode of travel best suits his physical and mental make-up and his means. Much practical wisdom will doubtless come to him from the aforesaid precepts and examples by the wayside, and still more will be knocked into him by mishaps and rude jostlings. He may save himself from a large share of Miss Fortune's mixed favors by carrying with him a few very old-fashioned, and therefore respectworthy, root principles of conduct. A manly man is sure of universal esteem for that fine quality. If to it he adds the polish of gentleness, which comprises the gracious demeanor, self-restraint, modest manner, and genial spirit that makes the man a gentleman, he at once gains a new and attractive influence, which means power, and all that power brings.

This much is certain, the men and women truly great, or

worthy of veneration, have preferred simplicity of life to ostentatious display. Simplicity in attire, in speech, in manner, in habits, accords naturally with strength of character and it enhances dignity.

A practical moral comes out of this, namely, this simple, gracious manliness is actually the most inexpensive first-rate outfit a young beginner can procure as an unfailing help and solace in the struggle for a career of success.



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COUNSELS OF INFLUENTIAL MEN

Common Sense in Choosing a Calling

By LORD CHESTERFIELD

[Philip Dormer Stanhope was born in London, September 22, 1694; and in 1712 entered Trinity Hall, Cambridge. In 1715 he became gentleman of the bedchamber to the prince of Wales, afterward George II., and entered the House of Commons. In 1726 he became fourth earl of Chesterfield, and in the following year, George II. succeeding to the throne, he was sent as ambassador to The Hague, where he remained six years. In 1733, for opposing Walpole's excise scheme, he was summarily dismissed from office; and, a quarrel with the king ensuing, he absented himself from court for a long period. When the duke of Newcastle became prime minister, he returned to power, though not to favor with the king, and in May 1745 became viceroy of Ireland. He administered the difficult affairs of that country with good sense and impartiality, and was recalled in April 1746 and became secretary of state.

Retiring from office in 1748, he spent most of his remaining days in private life among his books. A deafness increasing with age rendered him more and more unfit for affairs, though he made one notable reëntrance into public life in 1757, to smooth the personal and political difficulties of Mr. Pitt and the duke of Newcastle. He died on March 24, 1773. He was a wit and an orator, a man of polished manners and urbane habit. Within half an hour of his end, his friend Dayrolles visiting the sick-chamber, his last words were, "Give Dayrolles a chair." His fame is chiefly associated with the "Letters written to his Son" instructing him in all the secrets of worldly wisdom. They were never intended for the public eye and are in some respects hardly in accord with the advancing code of morals.]

IT is very certain that no man is fit for everything; but it is almost as certain too that there is scarce any one man who is not fit for something, which something nature plainly points out to him by giving him a tendency and propensity to it. I look upon common sense to be to the mind what conscience is to the heart—the faithful and constant monitor of what is right or wrong. And I am convinced that no man

commits either a crime or a folly but against the manifest and sensible representations of the one or the other. Every man finds in himself, either from nature or education—for they are hard to distinguish—a peculiar bent and disposition to some particular character; and his struggling against it is the fruitless and endless labor of Sisyphus. Let him follow and cultivate that vocation, he will succeed in it, and be considerable in one way at least; whereas if he departs from it he will at best be inconsiderable, probably ridiculous. . . .

You are now come to an age capable of reflection, and I hope you will do, what, however, few people at your age do, exert it for your own sake, in the search of truth and sound knowledge. I will confess (for I am not unwilling to discover my secrets to you) that it is not many years since I have presumed to reflect for myself. Till sixteen or seventeen I had no reflection; and for many years after that, I made no use of what I had. I adopted the notions of the books I read, or the company I kept, without examining whether they were just or not; and I rather chose to run the risk of easy error, than to take the time and trouble of investigating truth. Thus, partly from laziness, partly from dissipation, and partly from the *mauvaise honte* of rejecting fashionable notions, I was (as I have since found) hurried away by prejudices, instead of being guided by reason; and quietly cherished error, instead of seeking for truth. But since I have taken the trouble of reasoning for myself, and have had the courage to own that I do so, you cannot imagine how much my notions of things are altered, and in how different a light I now see them, from that in which I formerly viewed them, through the deceitful medium of prejudice or authority. Nay, I may possibly still retain many errors, which, from long habit, have perhaps grown into real opinions; for it is very difficult to distinguish habits, early acquired and long entertained, from the result of our reason and reflection.

The next prejudices that I adopted, were those of the *beau monde*, in which, as I was determined to shine, I took what are commonly called the genteel vices to be necessary. I

had heard them reckoned so, and, without further inquiry, I believed it, or, at least, should have been ashamed to have denied it, for fear of exposing myself to the ridicule of those whom I considered as the models of fine gentlemen. But I am now neither ashamed nor afraid to assert that those genteel vices, as they are falsely called, are only so many blemishes in the character of even a man of the world, and what is called a fine gentleman, and degrade him in the opinions of those people to whom he hopes to recommend himself by them. Nay, this prejudice often extends so far, that I have known people pretend to vices they had not, instead of carefully concealing those they had.

Use and assert your own reason; reflect, examine, and analyze everything, in order to form a sound and mature judgment; let no popular prejudices impose upon your understanding, mislead your actions, or dictate your conversation. Be early what, if you are not, you will, when too late, wish you had been. Consult your reason betimes: I do not say that it will always prove an unerring guide; for human reason is not infallible; but it will prove the least erring guide that you can follow. Books and conversation may assist it; but adopt neither blindly and implicitly; try both by that best rule, which God has given to direct us, reason. Of all the troubles, do not decline, as many people do, that of thinking.

COUNSELS OF INFLUENTIAL MEN

Securing a Position

By ROBERT CURTIS OGDEN

[Robert C. Ogden, a successful retail merchant, was born at Philadelphia June 26, 1836. He attended a private school until, during the summer holidays, worked as an errand-boy in a hardware store for one dollar and fifty cents a week. He read Sir Walter Scott and took long walks in the country lanes and woods. At fourteen he became a clerk in a dry-goods store, working up into positions of trust. He entered into partnership with the firm of John Wanamaker in January 1861, and has since maintained the connection, being now the head of the New York establishment. His interest in affairs outside of business has made him president of the board of trustees of Hampton Institute, Hampton, Va., a trustee of the Union Theological Seminary, a trustee of Tuskegee Institute, and he is an honorary M.A. of Yale. He delivered the address on Founders' Day 1894, at Hampton Institute, and has contributed various articles on the ethics and practice of business to numerous publications.]

THERE is a wide margin between securing employment and establishing a business position. The former is hard enough, the latter much harder, and this in spite of the fact that now, as never before, the business world is demanding men sufficiently capable and honest to fill places of trust and responsibility. But there is no experience which, to an employer of sympathetic temperament, who has to do either directly or indirectly with the employment of large numbers of people, is so sad as the unceasing procession of men and women seeking employment, who are not fitted either by training or character for any definite and special service. This condition has always existed, and, probably always will, despite the liberal amount of advice and suggestion that has

been so freely placed before every youth in the generations past and present.

Thus I am led to question whether the average young man will really be the gainer by the records of experience and opinion contributed by the men of affairs who counsel young seekers for employment.

A true young man, comprehending himself, having a proper self-respect, will understand that success is normal, failure abnormal. This is implied in Bishop Brooks' remark that "True human life begins with its circumference, as it were complete, and then fills in its space with its details." The accomplishment of any true development in life is based upon broad ideas, noble ambitions, splendid enthusiasm of the possibilities of living. There is vast inspiration in a comprehension of results of human effort in every field of action. Science and the mechanic arts, literature and the fine arts, business enterprise and commercial progress, every sphere of human activity, are radiant with illustrations of individual success and brilliant work, a great aggregation of mental, material, and moral achievements.

The conception of an ideal of what human ability can accomplish, the conscious possession of the same human qualities as have brought reward to so many others, should fill a young man with honest pride that he is a man, enjoying equal chances in the work of the world with others who have achieved. Thus he may have a stalwart self-respect that will be to him a lifting power from within, will create a power of resistance to temptation from without, and lay the foundation for the qualities of character and industry that are essential to true success in getting and keeping a business position.

INTELLIGENT EARNESTNESS

Intelligent earnestness is essential, and ultimately always wins. The words are easily read, but their translation into action calls for the best effort of which one is capable.

Intelligent earnestness includes a great deal. It takes

careful account of all details, especially the indications that are implied in personal appearance. A boy looking for a place must do it thoughtfully. He should be clean and neat. I have known clean hands and white finger-nails to decide the question in favor of a boy's employment, and I also have known black-rimmed finger-tips so to indicate slovenly carelessness as to cause a refusal. Costly habit is not needed, and showy dress is positively prejudicial.

It is nearly half a century since a boy that I knew came from a New England farm to seek his fortune in New York, alone, friendless, and barely fifteen years old. Nearly at the close of his first day in the metropolis, having gone from store to store all the day long, meeting with sharp rebuffs and coarse denials, he entered the large warehouse of a great firm. His wit had been sharpened by disappointment, and he keenly asked for the office of the senior partner. Obstacles were put in his way, but after a little he gained the desired audience and stated his case. In reply to a question as to what he could do, he simply replied:

"I can do anything that a country boy of my age can."

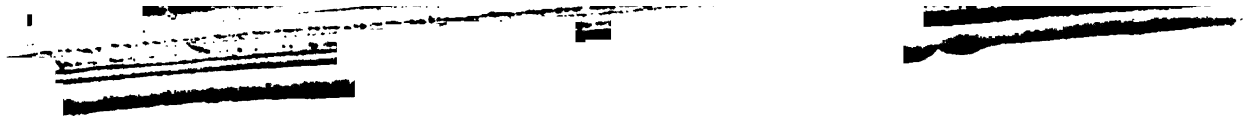
"Can you get here early in the morning, sweep and dust this suite of offices, build the fires, and do my errands?" the old gentleman asked.

"Yes, sir; I can do all that, and I am ready to begin to-morrow morning."

His quick wit, modest, manly earnestness, secured the place at once. The pay was small; a margin of fifty cents a week was all that remained over his board bill, but his salary was advanced three times during the first year, and at Christmas time fifty dollars that his father had with difficulty spared, to be used in case of need, was repaid and the boy had a proud sense of honest independence. In seven years he was a partner in the firm. By fidelity he had made himself indispensable.

Many years ago I knew a young man belonging to a family of high position in one of the continental countries of Europe. After a time his support from home ceased and he was suddenly thrown upon his own resources. Without knowledge

ROBERT C. OGDEN.



of any business, but full of dead earnestness, he began work. His first employment was as a mechanic's helper. Quickly he became a mechanic, but soon felt that he was fitted for a higher place. He canvassed a business district and found small encouragement. His impulsive manner and broken English were against him. Finally, in the office of an important firm, he was asked how much he had been earning, to which he made the somewhat brusque reply: "Not enough to live upon, but too much to die upon." The partner with whom he had been talking dismissed him with a denial. Another partner, being much impressed by the conversation, recalled him and an engagement followed. Shortly the young foreigner eclipsed every other employee in the business. There was nothing he could not do, and do better than his fellows.

Conscious of his capacity, he demanded a partnership, but there was no position in the firm for him. Too progressive to be permanently kept in a subordinate place, he left his situation and struck out for himself. Before long he was a creditor of his former employers. Wealth came quickly, a career of prosperity followed which lasted until his death at mature middle age, and a handsome fortune fell to his heirs.

These bits of experience to which I have been a witness are given to enforce the proposition—*intelligent* earnestness always wins. Note the words. "Intelligent"—that is, such thoughtful, considerate and wise display and application of energy as to make power effective. This point has a very important relation to each element of our subject, for it is a powerful factor both in securing employment and creating a business position.

Persistence and Industry

It sometimes occurs that young men born to wealth or commanding the power of influential friendships find a start in the business world comparatively easy; occasionally there is a genius, but neither wealth nor genius will make a position without the qualities of persistence and industry. Observa-

tion of the men who are filling eminent and powerful places in the business world proves the proposition that exceptional intellectual ability is not needed to secure success. Average men run the business affairs of the world, and the highest places are at the command of such men, provided that they display fidelity, industry, and intelligence, and are vitalized by character.

Two comparatively young men are now presidents of great railroad corporations. They are much in the public eye, and the world recognizes their superiority. The distance from the place of a hand on a gravel train to the presidency was short for one of them; for the other it was rapid promotion from a switch-tender's place to the headship of a corporation. You would not call them brilliant, but they are brainy, and with each of them force of character, simple, unobtrusive, without vanity or pride of position, impresses all with whom they deal.

Qualities that make men really valuable are recognized, and the places to be filled are seeking men to fill them. Not long ago the directors of a great corporation were in session, facing with uncertainty the filling of a vacant presidency. The masterful man of that board stated that a certain party, whom I will call B., was the man required for the place. Now B. was at that time filling an important subordinate place in another corporation. A two-minutes' conversation over a telephone, that followed, lifted B. to the presidency of a great railroad system. So do the places find the men.

My own sphere of information is small, and yet I know, as I write, of four places that carry salaries varying from $30,000 to $50,000 a year that are, and have been for months, seeking for proper incumbents. But great places are not seeking for unable men.

It generally occurs that the prizes of business life are not secured by the men whose thoughts and schemes are expended upon seizing them. Everywhere, in all ranks of employment, are men that take themselves too seriously. Such, almost without exception, are the men whose interests

are exterior and not interior. Their efforts are not directed toward self-improvement, toward the rendering of a better and increasingly improving service to employer or to the world. The first requirement is to be fitted for better and higher things; the second is to attain them. Preparation comes by painful steps and slow; promotion comes frequently to the truly earnest man as a surprise.

There is no position more pathetic than that of the over-placed man. His fall is usually only a matter of time. The world's judgment is accurate and almost inevitable. It is therefore of the utmost consequence that a man, whatever his position, should know the strength of his tenure. Let a man judge of his hold upon a place with an honest self-respect, conscious of what he is and can be; but as he values his position, let his self-judgment be free from vanity, conceit, or narrowness.

MAXIMS WORTH REMEMBERING

No employee can succeed unless he commands the confidence and respect of his employer. A sure road to loss of place is laid out when a young man concludes that he can leave ethics out of his theory of obligation to his employer. It is a cheap fallacy for a man to say that so long as he gives his employer the stipulated time and service the remainder of his life is his own to do with as he pleases. Poor fool! Underneath all is character. Utter fool is he that supposes he can compromise ethics and not have his life reflect the surrender.

Beer or whisky at lunch by many signs give token of their presence. The night's dissipation is attested by a cloud of witnesses in the morning. Debt with persons earning fixed incomes is frequently either dishonest or productive of dishonesty. Money obligations by an employee to persons with whom the employer has the business relation of purchaser or patron are almost without exception fraudulent. Eye service that depends for fidelity upon the employer's presence is merely stealing.

Innocent pleasures and proper recreation, if carried to such an extreme as to become an object, and not an incident of life, subordinates business to outside enjoyment, and thus renders proper service from employee to employer impossible.

This list of debasing influences might be greatly extended. They tempt men, especially younger men, from the strict line of business duty, and by impairment of character and limitations of habit are fatal to success. The fatality arises from the impossibility of concealment. Influences for good or evil are quickly apparent and results follow causes.

As a general statement, it is true that a young man's career is absolutely in his own keeping, and he is thus the master of his own destiny.

It is, therefore, axiomatic that, given a chance by securing employment, a young man creates his own place. Every occupation gives abundant field for study. In trade, a young man should know his stock, should master all knowledge that pertains to his merchandise, whence it is derived and how produced. If manufactured goods, he should know the history and development of the art represented and its relation to other arts. There is always a literature concerning any of the arts that gives the things demanded by the needs or tastes of our civilization. To master the special literature of his occupation should be the aim of every young man. Banking, railroading, shipping, insurance, the mechanic arts, and many other vocations are founded upon scientific systems. The superficial man will be content with knowledge of the routine that has to do with daily work, and the result will be commonplace mediocrity. The thorough man will be discontented unless he is always learning.

Master Your Work

In the Civil War times, when the entire financial interests of this country underwent sudden transition, a young man came very suddenly into a very commanding banking position. His influence was widely felt, and his remarkable

ability quickly made him a power in money affairs. Added to stalwart honor and industry that knew no pause was his mastery of all the details of his business. But this knowledge was not a sudden acquisition. As a boy in a country bank, doing errands and attending to the office, he lost no proper opportunity to make himself familiar with every detail of the bookkeeping, the routine of all the bank business, and as a boy, before any responsibilities of an important character had come to him, he was thoroughly posted in all that could be learned in the limited sphere of a country bank. Thus began a distinguished and successful career.

That boy was father of the man he came to be. Intense application is needed always in the creation and maintenance of a business position. It demands the highest and most persistent devotion, second only in its obligation to religion. God first, business next, should be the aim of every young man struggling for place and promotion. Study of the careers of successful men is always most interesting, and I would suggest that there is no more profitable knowledge to be acquired by a young business man. But there should always be the limitation that comes with a proper definition of success. There are great and successful men, as the world goes, who may serve as models for work, but whose aims in life are so utterly unworthy—men who make money their god—as to be frightful examples of the debasing power of success, when money and position become an end and not an incident of life. Money is a good friend if rightly used. Power and influence are blessings when their use is controlled by lofty purposes. But money, power, and influence, when controlled by selfishness, become a curse that debases the mind and corrupts the heart. Therefore, study men, but study them intelligently.

IMPORTANT LITTLE THINGS

There are apparently small things that have much to do with success—things small in themselves but great in their influence. Prominent among them are good penmanship

and good English. These accomplishments develop accuracy and refinement. Good health is a duty that cannot be ignored. Without it success is doubtful, and it is easier to secure and to retain than thoughtless young men are willing to admit. Neatness in personal appearance is another duty, and, like health, it can be maintained at far less cost than many suppose. These several things, and others equally simple, create an influence of gentility that is essential in business relations. Good breeding is on the increase in this country, and it counts powerfully as an element of success.

For a final word, let me call attention to the thought suggested at the beginning—namely, that a complete life, thoroughly rounded physically, mentally, spiritually, is the life that contains within itself the elements of success in material equally with higher things. The bane of living is incompleteness. The difficulty is that character is improperly centered, that young men do not see their problems whole, large, complete. It needs to be such a dreaming of dreams and seeing visions as creates ideals—sentiment, but not sentimentality. Then the struggle of life is to keep them. Occasionally an old man survives, bright, pure in heart, hopeful, radiant. Such are a matchless inspiration; always they are men that got their positions and kept them.

The life of additions creates and keeps a position; such is a growing life. The life of subtractions fails either to create or to keep a position. Every compromise of principle, every act for which apology or explanation must be made, every deed that must be covered with darkness, is a deduction. Add constantly, and you will both get a position and keep it.

Find Your Special Talent

By ROBERT WATERS

MANY young persons are in an uncertain state of mind as to the nature and extent of their natural abilities, and on this account find it difficult to fix upon the profession or calling which they are to follow for life. This feeling is by no means unnatural; it is the struggle of youth toward manhood and maturity. Only prodigies know from the start what they are best able to do. The mental powers of every young person, no matter how situated, are in constant process of development, and it is only after a certain stage of this development that one can plainly see wherein his strength lies. Sometimes a man tries two or three professions before he comes to see which is his proper one, or the career for which he is best fitted. This happens not only with men of ordinary but with men of extraordinary ability. Daniel Defoe was a trader, a soldier, a merchant, a secretary, a factory manager, a commissioner's accountant, an envoy, and what not, before he became an author, in which profession he had the greatest success because it was that for which he had the greatest talent. And even in this profession he went on improving and developing his talent; for he wrote a cartload of books before he wrote "Robinson Crusoe." Wilson the ornithologist went through a bitter experience in five different professions before he became a student of ornithology, in which he not only found the

greatest happiness of his life, but rendered invaluable service to the science of natural history.

Sometimes a fortunate accident reveals the sphere wherein one can succeed. "Most men," says Saint-Réal, "are like plants; they possess properties which chance discovers." A New York paper lately published an account of the career of six successful theatrical managers, all of whom came to their work by accidental circumstances. They saw their opportunity and took advantage of it. Let me mention one or two examples in other careers. Lord Erskine, the famous advocate, first entered the navy, in which he spent four years; but finding promotion not sufficiently rapid, he entered the army, in which he served for two or three years, when his regiment happened to be quartered in a town in which the assizes were held. Sauntering into court one day, he was invited to a seat on the bench by the presiding judge, who happened to know him; and, while listening to the pleaders at the bar, he was told that they were at the top of their profession. He began taking their measure, and he made up his mind that he could do at least as well as they did, and immediately began the study of law. The world knows the result. Erskine became the greatest forensic orator of his day and lord high chancellor of England.

A man may be a born merchant, as well as a born poet or orator; and this, too, is sometimes discovered by accident. Mr. A. T. Stewart, the millionaire merchant, was educated for the church, which he left for the schoolmaster's desk, and, by the merest accident, found that his real talent fitted him for the shopkeeper's counter. "He greeted me cordially," says the Rev. John Miller, in "The Independent," "and told me that he was designed for my profession; that what Greek and Latin he knew was for that purpose; that his early manhood had no other end in view; but that an old uncle had told him that a 'call' was necessary, and had described it in such a way that he recognized he had received no such thing, and felt driven to the choice of the humbler and less interesting work of a professional school-teacher. This it was that brought him to the states. His merchants'

life was an afterthought. And I learned how this came. He had saved a small pittance above his expense, which he lent to a passenger, a young man whom he had known in Ireland, who was to be a merchant. Stewart's loan of $78 helped to set him up. And, in a small shop of the city of that day, the young man strove hard to succeed; but finding that he was about to fail, he persuaded his friend Stewart to quit his school-teaching and take the shop, as the only means of making sure his money. It was in this way that Stewart made the discovery of his gift as a merchant."

Jonas Chickering was originally a cabinet-maker. Happening to see a piano in a New England town, he felt a strong curiosity to ascertain the secret of its structure. "It was the only one in town," says Mr. Endicott, "and so sadly out of tune as to be almost useless; but he closely inspected it, took it to pieces, discovered its defects, repaired it, and made it fit for use. This incident, trivial except as a mark of genius, had a decisive influence over his destiny. It begot a purpose in his heart to become something more than a journeyman cabinet-maker. In its result, it transformed him from a cabinet-maker into a distinguished manufacturer of pianos." He became a millionaire, and the owner and director of an establishment that turned out thirty pianos a week.

Most young men have little to do with the choice of the profession in which they find themselves. Their parents or guardians choose for them; and these often choose, not so much with a view to their fitness for the profession, as to its profitableness or prospective advantages. This last item is, of course, a matter of prime importance; but if inward peace and true profit are looked to, it will be found that a modest income in a congenial profession is preferable by far to the most brilliant pecuniary success in one of a contrary nature.

With those young men who have their professions thus chosen for them, one of two things happens: either they plod on for life in a mediocre way in the arena in which they are placed, or if they have talent, energy, and character, they push forward to eminence in their profession, or in some

other profession which they like better, and take their place among men of mark. A man of genius, no matter where placed, *grows* into fitness for his proper sphere. He cuts out a career for himself, in spite of all the obstacles that may present themselves; while his companions jog on for life in the rut in which they were placed by others. The Hon. Jonathan Chace, United States senator from Rhode Island, displayed in his youth a great fondness for study and books, and one day he told his father that he was almost ready for college. "Jonathan," replied the old man, who was a money-making Quaker, "thou shalt go down to the machine-shop on Monday morning." And to the machine-shop he went, where he remained for many years before he broke loose, and worked his way up to that sphere of life for which his talents fitted him. He became a distinguished senator, the originator of the International Copyright Law.

Mr. E. C. Stedman, in speaking of the facility with which Oliver Wendell Holmes composed his festive and society verses, says that "what one does easily is apt to be his forte." True; and I might add, that what one likes to do is apt to be his forte. Those scholars who take more willingly to one study than to another may find therein an indication where their talent lies. The wise Shakespeare says:—

> "No profit grows where is no pleasure ta'en;
> In brief, sir, study what you most affect."

This, therefore, Inclination, is the safest guide to the path in which you are most likely to succeed. What a youth takes a fancy to he is likely to have a talent for; and if he perseveres in it and makes progress in it, his talent is confirmed. I know there are some persons who, because they take a fancy to a certain line of work, devote themselves to it without ever attaining any degree of excellence in it; but these are people who have more zeal than judgment, or more vanity than either. They are weak in some part of their mental make-up. You may be sure it is not so much the love of the work itself that animates or attracts them as the

material advantages or the honor and fame they expect to derive from it.

Now the true artist pursues his work without a thought of anything but excellence in the execution of it or the benefit to be conferred by it. Love of fame, "the last infirmity of noble minds," he may indeed possess; but no visions of rank or power ever formed the mainspring of the exertions of a man of genius, or supplied the inspiration by which he produced his work. Some may point to Dean Swift as an exception, but he was an exceptional man in many respects. Swift declared that all his endeavors to distinguish himself "were only to secure a great title and fortune, that he might be treated like a lord by those who had an opinion of his parts." This was his object at one time; but I am sure that when he was writing "Gulliver's Travels," or the "Tale of a Tub," his delight in his work and his keen anticipation of its effect on his contemporaries were far stronger impelling powers than any anticipations of profit or power to be derived from it.

A youth of twelve years, who had played skillfully on the piano, once said to Mozart: "Herr Capellmeister, I should like to compose something; how shall I begin?" "Pooh, pooh," said the great composer, "you must wait." "But you began when you were younger than I am." "Yes, so I did," said he; "but I never asked anything about it. When one has the spirit of a composer, he writes because he can't help it."

There Mozart struck the keynote to genius. One who has the ability to accomplish something in art does not need to ask how to begin; nature teaches him how to begin. He takes to it because he cannot help it, as naturally as a duck takes to water. It is his delight to do this thing and no other; and this he does for the sake of the work itself, not for what advantage he may get out of it. Even the practical philosopher, the investigator of natural phenomena, does not pursue his investigations for the sake of the honor or profit he may get out of them; nor even for the benefit of mankind, which is a noble motive in itself; but for the sake of knowing,

of finding out, of discovering what was not known before: he investigates because he cannot help it. "That which stirs his pulse," says Mr. Huxley, "is the love of knowledge, and the joy of the discovery of those things sung by the old poets, the supreme delight of extending the realm of law and order ever farther toward the unattainable goals of the infinitely great and the infinitely small, between which our little race of life is run. . . . Nothing great in science has ever been done by men, whatever their power, in whom the divine afflatus of the truthseeker was wanting."

This being the case, why should any young person be prevented from busying himself in any harmless way that amuses him? Why should he be told that it is useless or foolish? Let him alone; he is developing his talent, struggling toward light and knowledge; and when his opportunity comes he will know what to do.

"A point of education that I can never too much insist upon," says Emerson, "is this tenet, that every individual man has a *bias* which he must obey; for it is only as he feels and obeys this bias that he rightly develops and attains his legitimate power in the world. It is his magnetic needle, which points always in one direction to his proper path, with more or less variation from any other man's. He is never happy or strong until he finds it; keeps it; learns to be at home with himself; learns to watch the delicate hints and insights that come to him, and to have the entire assurance of his own mind. And in this self-respect, or hearkening to the privatest oracle, he need never be at a loss. In morals, this is conscience; in intellect, genius; in practice, talent —not to imitate or surpass a particular man in *his* way, but to bring out your own new way; to each his own method, style, wit, eloquence."

How To Choose One's Calling

By EDWARD EVERETT HALE

[Edward Everett Hale, clergyman and prose writer, was born at Boston, April 3, 1822. He was educated at the Boston Latin School and at Harvard, where he graduated in 1839. For two years he taught in the Boston Latin School, and, after studying theology, was licensed to preach by the Boston Association of Congregational Ministers, and took his first pastoral appointment at the Church of the Unity, Worcester, Mass., where he remained between the years 1846 and 1856. Thence he went to the Boston Unitarian Society, known as the South Congregational Church, and has remained at its head ever since.

He has been a promoter of popular education through the media of Chautauqua circles and "Lend a Hand" clubs, and has pursued an active literary career both as a writer and lecturer. Besides numerous occasional papers and writings for periodicals, he is the author of "My Double and How He Undid Me"; "The Man Without a Country"; "The Skeleton in the Closet"; "Ten Times One Is Ten"; "In His Name"; "The Ingham Papers"; "Philip Nolan's Friends"; "Mr. Tangier's Vacations"; "Ups and Downs"; and, also, of works on practical ethics, under the titles, "How To Do It" and "How To Live." The former was originally contributed as papers to "Our Young Folks"; the latter, delivered in the Lowell lecture course in Boston in the year 1869, was included, in 1886, as the lessons in ethics in the Chautauqua course.]

PALEY says that it is a great blessing to mankind that ninety-nine things out of a hundred in our lives are ordered for us, and that we only have to make a choice one time, while ninety-nine are thus directed for us.

This is probably true. Both parts of the statement are probably true. That ninety-nine per cent of our duties are offered to us, and must be met, and also that it is well for us that we do not have a choice more often than we do.

The ease of choice is very different with different people. Some people decide promptly, and then rest squarely on the decision. Other people decide slowly and with difficulty, and some of them, even then, doubt their decisions after they have been made.

Did you never ride into town with your excellent Aunt Cynthia, who had to choose there some cambrics to face some dresses with, when she spent the whole morning in selecting among four or five kinds, and, after all, went back the next day to ask the dealer to be good enough to change those she had bought for others? Dear Aunt Cynthia is not the only person in the world who finds it hard to make a decision and hard to hold by it.

Now it may be well to take a long time to make a decision. That is matter, very largely, of temperament. I had two near friends, who came to visit me on two different evenings. To each of them I showed my book of questions, which I call a "Moral Photograph Book." You have twenty questions which a person is to answer, offhand, in writing: such questions as, "Who is your favorite author?" "What is your favorite newspaper?" "What is your favorite flower?"

One of my two friends was a great banker. He took the book and his pencil, and answered the twenty questions almost as fast as he could write. He was used to making up his mind promptly. His business required prompt decision. Some man would say at his desk, "What will you give for High-flyers to-day—to be delivered in thirty-one days?" and he would answer at once, "I will give thirty-seven and a half." Such promptness had become with him second nature. My other friend was a judge of the Supreme Court. He took the first question, and discussed it, and then left it for another discussion. He talked on the second question, and wrote an answer at last. The third was left, subject to a second consideration. Most entertaining these discussions were. But at the end of a long visit he had only answered six, and he never answered the others.

Now, I think both these men were right, morally. One

of them is made for prompt judgments. That makes him a great banker. The other is made for careful judgments which command the respect of man. That makes him a great judge.

But each of these men would have held to his judgment when he had made it. There they differ from your poor Aunt Cynthia. And we must train ourselves to do what the old lawyers required—"to stand by the decisions." "*Stare decisis*" was their phrase. "If you start to take Vienna, take Vienna," said Napoleon. And He who directs us all says, "He who endureth to the end, the same shall be saved."

Bearing in mind, then, that our choice of occupation is not a thing for to-morrow to be changed the next day, we go about it seriously. William Ware said once, rather sorrowfully, that a young man is called into his father's room for a serious talk of an afternoon, and in fifteen minutes his career for all life is decided for him. This ought not to be so. He and his should take, not days only, but months and years in the choice, if they can. His temperament is to be considered—his real ability—what he likes and what he does not like. We need not care much for the consideration whether this or that calling is overcrowded. If there is not room in one place for a good workman, there is in another. Or, at least, it may be a good step in the ladder for something higher. Mr. Webster says, "There is always room higher up."

Some of the very best artists have said, as to fine art, that you must not ask whether a pupil has a genius for his art, but whether he likes it. They say that if a boy likes to play the piano well enough to do the hard work, you should let him go on, hoping that the ability will appear. But I observe that this instruction is given by people of genius. They may be too apt to think that the pupils are like themselves. This is true, that "liking" and steadiness make the best test we have. As to genius, we are often mistaken. But there are questions to be considered besides this of liking, and, probably, to be considered first.

This is certain, that you are to do the duty which comes next your hand. Say, you are sixteen years old. Your father and mother have other children to care for, and it is time you are earning your living. I should not say then that you have a large range in choosing what you will do. You must do what there is to be done in that place, at that time. Thus, the doctor wants an intelligent boy to drive his horse for him. Or, Mr. Longstroth wants an intelligent boy to copy for him his treatise on the "Visigoths in Catalonia." Or, John Brither wants an intelligent boy to carry his three-leg and his chain for him in the survey of the Hills Common. Where there open before you these three chances to be of use and to earn your living, you may select from the three that one which you like best, either for the pay, the open air, or the man whom you are to work under. But you must not reject all, because you do not like any one. You have these three lines from which to choose, but you must choose one duty next your hand. As among these three, you will choose that which on the whole offers most recompense, which on the whole you like best, and on the whole offers most promotion.

But I should not call such decisions the choice of one's calling in life. These are rather steps in education, and you select them as a man might choose one of two or three schools which were open to him. They will, among other things, show you what you are fit for, and what you can do well, which, probably, at sixteen years of age, you do not know.

When the time comes for a decision more likely to be of permanent importance, you have to ask:—

1. Is this business right or wrong? You must not be a pirate. You must not be a counterfeiter. You must not be a burglar. You ought to go into no business which in practice, and generally, injures your fellow-men more than it helps them. You may go into the manufacture of powder, because, though powder kills people, it has other uses much larger than those of murder. But you ought not to retail liquor, nor sell liquors for a beverage. I would not manu-

facture them, though some liquors have some uses. You must not, intentionally, lead men into temptation.

2. Of two callings, one of which is better for your constitution and health than the other, you choose the healthier.

3. Look shyly on any calling which does not open out into larger lines of life. You have a right, as you grow older, to regular promotion.

4. If you have a fair opportunity to carry to a new place the resources or attainments of an old place, there are good reasons for doing so. The chances of young men and women are, on the whole, better in a new country, and it should be so. For the invalids, those who are not adventurous, and the people who have tried themselves and have proved failures, all like to stay in an old country, and they keep down the rates of compensation there. This is a legitimate reason why the well people, the adventurous, and those who want to try themselves should become apostles to a new country.

5. Choose what is in the line of your genius, if you know what that is. But, as has been said, until they have tried, very few people know. And, on the whole, work tells. Your great artist is a great artist, but very likely he would have been a great machinist, or a great poet.

6. An American has no right to take any calling in which he cannot serve the state when the state needs him. He must take his share in the moral, social, and religious life of the town in which he lives.

Hints for the Young Beginner

By EDWARD WILLIAM BOK

[Edward W. Bok, editor and writer, was born at Helder, Holland, October 9, 1863. He came to the United States at the age of six and was educated in the public schools of Brooklyn, N. Y. He entered an office of the Western Union Telegraph Company as a stenographer and went from there to the publishing house of Henry Holt & Co., in 1884. After remaining there one year he entered into the employ of Charles Scribner's Sons, which firm he left in 1888 to become editor of the "Ladies' Home Journal" in Philadelphia. In this connection his success has been pronounced. Besides conducting this paper, whose circulation he has increased enormously, he has written such works of advice to young men as "The Young Man in Business" and "Successward."]

THE first element of success with a young man starting out to make a career is a correct knowledge of himself. He should, before he attempts anything, understand himself. He should study himself. He should be sure that he has a correct knowledge of his own nature, his own character, and his own capabilities. And it is because so few young men have this knowledge of self that so many make disastrous failures, or fail to achieve what they set out for themselves.

Every man in this world is created differently; no two are alike. Therefore, the nature, the thoughts, the character, the capacity of one man is utterly unlike that of another. What one man can understand another cannot. The success of one man indicates nothing to another. What one is capable of doing is beyond the power of another. Hence it is important that, first of all, a young man should look into himself, find out what has been given him, and

come to a clear understanding of what he can do and what he cannot do.

It is one of the most pitiable sights imaginable to see, as one does so constantly, so many young men floundering and fluttering from one phase of life to another, unable to fasten upon any special thing, simply because a knowledge of themselves is absent. The result is that we see so many round men trying to fit themselves into square holes.

"But," a young fellow asks, "how in the world do you get an understanding of yourself? How do you go about it?" No definite answer can be given to the question, any more than can a certain rule be laid down. An understanding of oneself is reached by different methods by different people, generally each method being personal to oneself. But this much can be said: every thought, every taste, every action, reveals ourselves to ourselves, and it is in the expression of these that we best learn our natures and our characters. We see ourselves with unmistakable accuracy, for example, in what we most enjoy in reading, in the people whose company pleases us most, in the things that interest us; and where our tastes and interests lead us we are generally truest to ourselves.

Some writer has said that most people find themselves out best while they are at play, upon the basis that a man shows his real side in the pleasure which he seeks and enjoys. This is true in a large measure. And the character of his pleasures will have both an indirect and a direct bearing upon the more practical side of his nature. If a young man visits an art gallery, for example, and finds that the pleasure he derives from the pictures takes the form of recreation to the mind, that he is delighted and interested in the canvases he sees so long as he is before them, but feels simply refreshed after he leaves the gallery, it is plain that his nature is not one suited to art as a vocation. He employs the picture as a means of recreation from some other study which engrosses him more closely. If, on the other hand, his instincts lead him to an art gallery, and he studies rather than enjoys the pictures that he sees, is curious as to the

methods of the artist, and goes away with his mind charged with the intention of getting further knowledge, from books or other authorities, of what he has seen, it is natural to assume that the art instinct or taste is within him, and he should give it the fullest play and chance of development. But he should in every way feel, realize, and know that a love of art possesses him before he adopts it as a profession. And thus, in a way, a young man has an opportunity to study himself through his pleasures.

If, as a further example, a young man finds himself seeking the company of men older than himself, men of affairs of the world, is happiest when he can be in their company and hear them talk of business, chooses the reading of the lives of successful men as his literature, and leans toward the practical side of life, finding his keenest and truest enjoyment amid the bustle of the mart, the indications are that his nature points him to a business career. If he feels this way, it is well for him to give his developing tastes full play, and follow where his instincts lead him. After a while what was at first mere instinct or an unformed taste will develop and point him to something definite in the business world, and if he be true to himself he will sooner or later find that particular position he is best fitted to occupy and fill. His capacities will reveal themselves to him, and they will teach him his limitations. This knowledge need not thwart his ambitions, but ambition should always be just a trifle behind judgment, if possible, or, at all events, not in advance of it. Ambition is a splendid quality if properly guided and kept within check; it is a fatal possession when it is allowed too full development or sway. Like fire or water, it is a capital servant, but it makes a poor master.

I think in this connection that parents might be a little more careful than they are in many cases how they try to dissuade a son from the kind of work for which he hungers or shows decided taste. It may not always be agreeable that a son wishes to be a physician. The parent would rather see him a lawyer, as his father is. But it does not necessarily follow that his son can be one. If a son's tastes

tend toward medicine, great care should be taken how his tastes are attempted to be turned toward the law. There are enough bad lawyers now who might have been great doctors had they been left to choose their own careers. A prominent New York man identified with the two leading law and medical schools of that city told me not long ago that each year these schools were turning out scores of young men who drifted at once into car conductors, station agents, and commercial clerks. And this is simply because of the mistakes of parents in trying to force round pegs into square holes. It cannot be done. No sight is so sad as a son forced by his parents into a trade or profession which is uncongenial and distasteful to him. A young man cannot honestly make a success in any business unless he loves his work, any more than a husband can be happy in his home unless he loves his wife.

I do not counsel a blind following of oneself, particularly during the formative years of life. But I do believe most earnestly that every man is given a certain thing to do in the world, and that, by a proper study of himself, he, and he alone, can arrive at the clearest and surest knowledge of that particular object. One's character is often molded through the influence of another; but it is equally true that every man is the architect of his own fortune, and that his truest course in life is to follow, not the guidance of another, but his own instincts. In other words, young men should, as early in life as possible, get into touch with the idea of their own responsibility, and be taught the great lesson that, however well others may advise, they, and they alone, must carve out their own careers. The most successful careers, the most honorable lives in the history of the world are those which have been shaped by their own hands. There is an element of danger in this, of course, but the element is small in comparison with the greater danger which lies in the formation of a career against one's own instincts.

The aspirations of the young are not to be checked by the experience of the old. No matter how rich or full a man's experience may have been, it counts only in a sense

of general application to another career which stands upon its threshold. Years should teach wisdom; but if we all waited for years to bring us wisdom, this world would be a sorry place to live in. Youthful imaginings may lead to mistakes, youthful enthusiasm may encounter disappointment, but only experience, real and actual, can demonstrate these things to a young man. And the experience is good for him if it teaches him a better and truer knowledge of himself and his capacities. The greatest figures in the world's history show that they were made through experience, and what experience taught them. This is not saying that the young have no use for the old. They have. But the rule should be, "Young men for action, old men for counsel." Experience looks backward; enthusiasm looks forward. It is the enthusiasm of youth which is brave and strong and attempts the impossible. If we attempted only the possible in this world, we should soon stop where we are; it is for the young man, with his enthusiasm, to battle with the impossible and carry the world a step farther on in discovery, if not in actual accomplishment.

I say this because every young fellow ought to feel that, to a large extent, he stands alone for himself in the world. Counsel he should seek, but action is his. And to make that action sure and wise it is necessary that the workman should understand his tools. He must know with what he has to work; and once sure of his tools, he must learn the thing he has set for himself to do, having a distinct purpose in view, and, being fully conscious that he is right and capable, not allowing himself to be swerved from his aim. After acquiring true knowledge of himself, I know of nothing so valuable to a young man as an absolute distinctness of purpose, and then pursuing that purpose to success. In natural sequence comes, therefore, the question of "What really is success?"

COUNSELS OF INFLUENTIAL MEN

Have a Definite Aim

By PHILIP STAFFORD MOXOM

[Philip Stafford Moxom, D.D., clergyman, was born at Markham, Canada, August 10, 1848. Removing with his parents to Michigan at an early age, he entered service as captain's boy in 1862 with the Army of the Cumberland, then at Fort Donelson, and the following year enlisted in the Seventeenth Illinois Cavalry, where he served until 1865. In 1866 he entered Kalamazoo College, Michigan, but removed in 1868 to Shurtleff College, Illinois, where he continued his education until 1870. His first year out of college was devoted to the study of law, but this career was abandoned for the ministry, to which he was ordained September 19, 1871. In 1876 he removed to Rochester to pursue his theological studies at the seminary. In 1878 he was called to the pastorate of the First Baptist Church in Cleveland, Ohio, from which he removed in 1885 to accept a unanimous call from the First Baptist Church of Boston. In March 1894 he resigned and went to the South Congregational Church at Springfield, Mass., which he still serves as pastor. He has filled the post of university preacher at Harvard and occupied a similar office in several other Eastern colleges. He presented a paper on "Immortality" before the World's Parliament of Religions, at Chicago, and the sermon before the World's Peace Congress, at The Hague, and was Lowell Lecturer in 1895. In 1894 he published "The Aim of Life"; in 1895, "From Jerusalem to Nicæa" and "The Church in the First Three Centuries"; in 1896, "The Religion of Hope," providing at the same time many articles for religious and secular periodicals.]

IT is the high distinction of man that he is capable of living with an aim—that is, with a purpose which, reaching through all his life, unifies it, and gives it directness and force. An aim in life is impossible to creatures that have no reason. It would be impossible to man if he were an automaton—if he were not a rational, free personality, having duty and a destiny. There is, then, a singular abdication of his real dignity by the man whose life is without purpose; and there is

no more serious and important matter for the young to consider than just this one of life's aim. It is important because it intimately concerns success, and, still more, because it concerns the development of character.

The aim of life includes both an object or end toward which the life moves, and a purpose which impels to that end. By this phrase I now mean the supreme object and the ruling purpose of life. The aim of life is that which creates life's tendency, and supremely determines conduct. Conduct, in the long run, must be consistent with our ruling purpose, for it is this which qualifies and directs conduct. What you are supremely living for determines the course you are taking year in and year out. The definite trend of your life discovers your aim. It is not something outside of you, compelling you this way or that; it is you—the complex of your generic choices and volitions.

Always you are moving somewhither, and you are becoming somewhat; and the direction which you are now taking, the character which you are now forming, becoming fixed, the success or failure of your life is unchangeably determined.

That is the most critical moment in your experience when you consciously and deliberately ask: "Whither am I going; what am I becoming in thought and character?"

Then, if ever, is the choice made, the purpose formed, which henceforth makes your life-story easy to read. Many young people step upon the threshold of responsible life and, amid the multitude of eager self-questionings that rise in their hearts, the one chief question scarcely appears. They ask, "How can I best earn a living? What trade or profession shall I learn? What business shall I follow? How can I get an education? How can I secure pleasure? How can I make a fortune?" but deeper than all these are the questions that give meaning to all the rest: "What am I living for? What shall be the supreme purpose of my life?"

A Definite Purpose

The thoughts that I wish to present to you gather themselves about three propositions:—

The first of these is: Every one ought consciously to have an aim in life. Whether he is conscious of it or not, every one has a ruling tendency; but every one should have a controlling and persistent purpose in life. No one has a right to live aimlessly, for no one has a right to abandon reason and self-control, and consent to be a mere waif drifting hither and thither like some plaything of the winds. We are endowed with powers that make us capable of good and often great achievement. We are gifted with reason, and conscience, and will, in order that we may both become and do that which is noble and beneficent.

> "For what are men better than sheep or goats,
> That nourish a blind life within the brain,"

if they live without any purpose that is essentially higher than the instincts which prompt them to eat, and sleep, and propagate their kind?

But, besides being ignoble, a purposeless life is inefficient; to aim at nothing is to hit nothing. The cannon ball strikes somewhere, indeed, though the cannon be fired at random. So each of us is moving toward some end, though that end, undetermined by choice and rational endeavor, demonstrates the futility and failure of a life. Each soul should be, not the missile aimlessly flung upon destiny by external forces—not the ball that flies wildly to an unperceived mark—but the gunner that aims his piece, and, with conscious purpose and an inherent propulsive force, sends the ball to a definite goal. Many men fall short of that at which they aim, and some men attain more or other than the specific object which they sought; but no one who has lived with a purpose has failed of a certain efficiency.

Of first importance, then, in the consideration of the question as to what your life shall be, is the fact that you cannot avoid moving toward some end, good or bad, and

that it is your duty to move consciously in the line of a clearly defined purpose.

The second proposition that I would present to you is: The supreme aim of life should be consonant with the nature and capabilities of the whole man. The chief end sought should be such as to bring to their highest development all our powers, mental and spiritual. It should be comprehensive enough to include all right temporal ends, and of such moral excellence and attractive force as to subordinate to itself in complete harmony all the limitless detail of our daily choices, plans, and endeavors.

Do Your Best

It is a principle of practical ethics that every man should aim to do some one thing in this world supremely well; and in order to attain the highest efficiency it is necessary that each should do that for which, by temperament and training, he is best fitted. There is a natural division of labor indicated by natural aptitudes: one man is born with a special aptitude for trade, another for invention, another for teaching, another for mechanics, another for persuasion and argument. No man can do all things, or even many things, equally well; efficiency inexorably demands concentration of effort. Definiteness of aim in life's work is a chief factor in successful achievement.

If you are fitted to be a mechanic, be a mechanic, and such a mechanic that those about you will find your services indispensable. If you are fitted to make shoes, make shoes, and such shoes as all the world will wish to walk in them. If you are fitted to be a farmer, be a farmer, and with such assiduity and skill that the earth will give to you, as to a master, the meed of her most abundant harvests. Be artisan, be engineer, be merchant, be lawyer, be physician, be teacher, be artist, be poet, be a worker, a producer of values, a true servant of your fellow-men—and, whatever you do, do that with all your energy; only thus can you attain success.

All these ends in the sphere of utility are relative; they are not ultimate. No man has a right to be a mere tool, a mere wheel or spindle in the great manufactory of the world; and no man can rest with lasting satisfaction in the achievement of any material end. He whose entire mind is concentrated on some temporal object, who seeks only success in business, or eminence at the bar, or fame in literature, will find at last that there are capabilities in his nature for which he has not provided. He may reach what he aimed at—wealth, power, pleasure, fame—and be, after all, essentially a poor creature. No earthly and selfish pursuit can absorb the whole of a man's thought and desire without doing him irreparable harm. What is more pitiable than a rich man with a little soul, or a learned man with a starved and shriveled heart? Manhood is of more worth than money; character is more precious than craft or skill. Fullness of being is superior to encyclopedic learning; the graces of gentleness and pity and love are more beautiful than all the accomplishments of art. Integrity and wisdom and chivalrous temper are better than power and fame. Completeness in life is attained only in the line of some aim which, including any or every temporary end, and giving it worth, reaches beyond earth and time to find its full scope in the eternal life of the soul.

Our discussion has prepared us, now, for the third proposition: The one aim which fulfills all the conditions of a perfect aim is that indicated in the familiar words, "Fear God and keep His commandments, for this is the whole duty of man." Let us interpret largely, for in religion and morals the large interpretation is always the most likely to be right. "Fear God"—that is, believe in God with the reverence that is the soul of true worship, and the love that is the spring of true obedience. "Fear God and keep His commandments" is the comprehensive formula of practical righteousness, "for," as the wise man pithily adds, "this is the whole duty of man." Here are presented both object and purpose great enough to comprehend the entire range of human aspiration and endeavor.

The High Ideal

It is the highest conceivable, for God is the ultimate Excellence; He is the source and Sovereign, and goal of life. He is supremely holy; to serve Him perfectly is to become like Him, therefore to attain the highest excellence. He is supremely good; therefore to love Him perfectly is to attain the greatest blessedness. He is supremely wise; therefore to obey Him perfectly is to be in absolute security, and at the same time to be in the realm of absolute liberty. It is the nature of man to grow like him whom he devotedly serves. God is the absolute ideal of mortal beings. The goal of the finite spirit is likeness to the Infinite Spirit, and participation in the infinitude of His beauty and power and joy; to aim at less than this is to sink below the divinest possibility of our nature, which derives its being from Deity.

This aim is the broadest conceivable, for it includes all that is good. It is consonant with our whole nature; it brings under one perfect law body, mind, and spirit, and thus coördinates all our capacities and powers. For God calls a man to be upright and pure and generous, but He also calls him to be intelligent, and skillful, and strong, and brave. You can have no excellence of mind or heart, or of body even, which has not place in the true ideal of godliness. You can have no grace of person, or power of hand and brain, that has not place and use in God's scheme of human life. There is thus the widest scope for a true ambition. There is nothing that it is right to do, and that it is worth doing well, but will be done better when the motive does not exhaust itself in the specific achievement, but goes on to God.

Adam Bede very rightly thought that "good carpentry is God's will," and that "scamped work of any sort is a moral abomination"; and he was wiser than he knew when he said: "I know a man must have the love o' God in his soul, and the Bible's God's word. But what does the Bible say? Why, it says as God put His sperrit into the workman as built the tabernacle, to make him do all the carved work

and things as wanted a nice hand. And this is my way o' looking at it; there's the sperrit o' God in all things and all times—week day as well as Sunday—and i' the great works and inventions, and i' the figuring and the mechanics. And God helps us with our headpieces and our hands as well as with our souls; and if a man does bits o' jobs out o' working hours, builds a oven for 's wife to save her from going to the bakehouse, or scrats at his bit o' garden and makes two potatoes grow instead of one—he's doing more good, and he's just as near to God as if he was running after some preacher and a-praying and a-groaning.'' There is the best sort of practical theology in these homely phrases.

Commerce, mechanics, statesmanship, literature, and art are all consecrated in the thought of him who works for God. Think you Angelo did not reach nobler results because he carved his own faith in forms of breathing marble, and painted it abroad in the glory of his frescoes? Think you Hugh Miller read the story of the rocks less eagerly and carefully because he felt he was reading the thoughts of God written deep in the strata of the earth? Think you Carey made poorer shoes because while he stitched and hammered at his cobbler's bench the love of God made melody in his heart, and great schemes of missionary enterprise took shape in his mind? My young friends, the true service of God is so broad, so inspiring, so strong and pure in its motives, that by it all life is lifted to a higher plane. No honest work is sordid when done for Him.

When all that you do is truly done for God, you escape that bondage in which so many men labor—the bondage to the material and temporal. How much work is mere grind in a dull round of days without horizon; how much work, indeed, seems linked with peril to our best selves! We are depressed or corrupted by our very labor.

> "Our nature is subdued
> To what it works in, like the dyer's hand."

There is danger even in achievement; but you may win wealth safely when you win it for God, for then, through

you, it becomes ministrant to humanity. You may grasp power without harm when you seek it and wield it for Him; you may covet the magic charm of poetry and art without rebuke, when you make it a service to Him.

Get learning, get skill, get culture, get power; the more the better, if these are got that you may the more fruitfully serve God. Make the most and the best possible of yourselves for Him; He is worthy of all that you can win and offer, and He takes delight in all our attainment.

The Greatness of Goodness

Then again this aim is open to all, and is attainable to all. You may not be great as the world measures greatness; but you may be good with the goodness of God, and that is to be great at last, for there is no true greatness that is not goodness. You may not be rich in houses and lands, but you may be rich in knowledge and virtue; and such riches no fire can burn and no thief can plunder. You may not be skillful in invention and art, but you may be, which is better, skillful in the art of living patiently and bravely in the midst of trial. You may not have power to move multitudes to your purpose by the spell of genius, but you may have the finer power of giving comfort to many a troubled heart. This you may have, the joy of living purely and helpfully, and of seeing in every vicissitude of life the guiding hand of your Heavenly Father.

Here then is an aim in life which draws the soul upward and not downward, which is so broad as to give scope to every power of your nature, and which is attainable by all who seek. What do you think of it? You are beginning (or have you just begun?) the serious business of life; your heads are full of wishes and hopes and fears. Some of you look forward with buoyant spirits to the prize which you covet. Some of you, perhaps, are beset by anxious forebodings; the struggle for bread makes the day dingy and the future dark. Life is God's precious gift to you; what will you do with it? Now your ideals are forming; now you are

shaping that conception of life which will rule all your future action. Nobility of thought and aspiration is natural to the young heart. Most young men have a native capacity for chivalry and uprightness; a sordid and selfish youth, a youth without generous impulses and pure aspirations, shocks us; and, says Theodore Munger, "There is no misfortune comparable to a youth without a sense of nobility. Better be born blind than not to see the glory of life."

To you, life, though it is still vague, is sweet and full of promise. What will you do with it? What is your real aim in life? The voice of God is commanding you to a purpose and aim, and inviting you to a service which, welcomed and accepted, will make your life pure, beautiful, and divine.

"A sacred burden is this life ye bear.
Look on it, lift it, bear it solemnly,
Stand up and walk beneath it steadfastly.
Fail not for sorrow, falter not for sin;
But onward, upward, till the goal ye win."

Various Views

THE whole secret of success is contained within this compass of a few plain words, writes Rafford Pyke in the New York "Commercial Advertiser." In starting out in life, put instantly aside all immediate thought of your own dignity and your own superiority, of your own exceptional gifts, and of the brilliant possibilities which you think exist within you.

You may be just as superior as you think you are, and even more brilliant than you believe yourself to be; but no one else is going to know it until you have done something to make this evident.

What you really want is a chance to begin, to get in touch with human beings who are already established, and who are in a position to discover merit, to reward it, and to give it the opportunity which it deserves. Moreover, however brilliant you may be, and however great may be your native gifts, there is always, whether in business or in a profession, a certain technical experience that is necessary before your brilliancy and your gifts can be made to tell.

The young man from the business college may have learned the art of keeping books and of being an expert accountant; yet when he gets a place with some particular firm the system in use there is very likely to be an entirely different system from the one that he has learned; and while in the long run his training may be helpful, at the first he must just be a beginner like the rest, and must expect to

make mistakes and have fault found with him, and to learn that no one whatever is in reality important.

In like manner the young person who has, perhaps, been the exchange editor of a little school monthly or who has even been contributing to a local newspaper, and has written nice little essays which he has read before a literary club, must not expect to walk magnificently into the sanctum of an editor and ask for a $5000-a-year position upon that editor's paper or magazine. He must be very thankful if he gets a chance to do the meanest kind of scrubwork at space rates or on a salary of $7 a week; and if he is fortunate enough to get this salary, he ought to do about $500 worth of work a week, for, while the position is not a permanency in his life, it is an open door, an opportunity, a basis for something better. Yet this is just what so many beginners fail to see.

TRICKERY A BUSINESS MISTAKE

For the benefit of any of the young and rising generation who may have imbibed the notion that the proper way to get rich in business is by resorting to tricks, we want to emphasize the truth that it pays to be honest, says the "Merchants' Journal."

A firm that tries to palm off a swindle is liable to ruin the reputation of an entire neighborhood, or even a whole state or country. A few years ago the United States had a large share of the cheese trade of the world. Then a few cheese-makers concluded that they would get rich faster by selling "filled cheeses." As a result, Canada captured a good share of the cheese trade that originally belonged to the United States.

A short time ago some millers concluded that it would be a smart thing to adulterate their flour by mixing in corn-meal, which wasn't bad, and then some others decided that they could do better by mixing in ground gypsum. Other dealers used clay—Carolina clay. The chances are that there wasn't one barrel of flour in a hundred made in the

United States that was adulterated, but that one in a hundred hurt the other ninety-nine. In several foreign markets American flour is regarded now with suspicion, and every honest flour dealer in the United States is bound to suffer on account of a few rascals.

Some few years ago several shippers, who ought to have been in the penitentiary, shipped diseased meat to Europe, and the Kansas hog has not yet recovered from the slam on his reputation. Foreign potentates, who don't like us any too well to begin with, have pronounced the American hog unclean and refused him admittance to their respective kingdoms. The United States has spent millions of dollars to prove that the hog is all right, and the fight isn't over even yet. In the long run it pays to be square.

ORDERLINESS

The shipping clerk kept his rubber stamps in a big, deep box on a shelf near him, says the "Furniture Journal."

"Where they are handy," he said.

But the errand boy was looking for an opportunity to make himself invaluable, so at noon, while he was "in charge" of the works, he drove small nails into the partition in such a manner that each rubber stamp could be hung separately on two nails. An impression of the stamp was then made upon a small slip of paper, and this slip was pasted above each stamp.

The appreciation of the shipping clerk was shown when he said this arrangement saved him at least an hour's work every day.

Some day that errand boy will be the proprietor of a business so systematized that he will not grow prematurely old with worry.

THE PROFESSIONAL MAN

The Army

By JOSEPH WHEELER

[Joseph Wheeler, soldier and statesman, was born at Augusta, Ga., September 10, 1836. He was educated at private schools in Connecticut and New York state and finally entered West Point, where he was graduated in 1859. He was appointed second lieutenant of cavalry and served in the United States Army at posts in New Mexico until April 22, 1861, when he resigned and entered the Confederate army. After the battle of Shiloh he was given a cavalry command. He saw much active service, rising to the rank of brigadier general and later to major general, fighting at Chattanooga and Chickamauga, and he also opposed Sherman's raid in Georgia. Later he engaged in the defense of Savannah. He was promoted lieutenant general in February 1865 and continued in charge of the cavalry under General Johnston until the surrender in April.

After the war he studied law, was admitted to the bar, and settled at Wheeler, Ala. He was returned to the Forty-seventh Congress in 1880, but his seat was successfully disputed by W. M. Lowe, the Greenback-Democratic candidate. Upon the death of Mr. Lowe a few months later he was elected and served continuously until the declaration of war with Spain. He then resigned his seat in Congress and volunteered for service in the field, being appointed major general of volunteers, and assigned to command of the cavalry division. He participated in the skirmish at Guasimas and later in the engagement at San Juan. On July 15th, being appointed senior of the commission of capitulation, he dictated the terms that were put into effect the following day. He had general command of the hospital camp at Montauk Point, and so continued until troops were mustered out in October. After his return to Alabama he was unanimously reëlected to Congress, has since participated in the Philippines service, and was appointed brigadier general of the regular army. He retired from the service in September 1900.]

THE military profession is one that carries with it the certainty of hardships of the most trying character, with only the merest possibilities of winning any high reward. Of the hundreds of thousands who enter the pro-

fession, many of whom have all the qualifications for brilliant success, only very few have the good fortune to be so situated as to have these qualities brought into great prominence. The profession has, however, many fascinations even for officers who do not win great distinction, and the pride, adventure, and excitement pertaining to it are pleasant in the extreme to one of an active, ambitious temperament.

A young man who looks forward to following any calling in life begins by investigating the ways and means by which he is to qualify himself and obtain the first foothold for the upward climb. Should he aspire to one of the great civil professions, such as law or medicine, he finds the well-defined avenues of the collegiate and professional course; but should he aspire to the profession of arms, he finds that the officers of the army are appointed in three ways: first, from the graduates of the United States Military Academy; second, from the number of soldiers who have served with distinction in the ranks; and third, from civil life. In each of these three ways there enters an element of uncertainty greater by far than with any other calling, and this of itself tends to put a distinct stamp upon those who attain the desired end and become officers of the army.

No Prospect of Wealth

Having obtained his commission through any of these three channels, the young officer has no prospect of wealth; but he can look forward to attaining reasonable rank and pay, and thus enable himself to devote his life to rendering faithful service to the government. His duties take him to various parts of the country, and sometimes out of it, and he thus becomes nationalized and freed from narrowness. The emoluments of his positon are not sufficient of themselves to attract or hold the best talent, but pride in the profession and love of the country and of the service keep many men in the army who could attain great success in other walks of life.

Among our most successful soldiers we find principally the trained graduates of the military academy and those few whom Fate has gifted with such wonderful natural ability that they are bound to succeed in anything, and to whom the circumstances of war have given the opportunity of developing military talent. Instances of this kind have been cited to depreciate the value of military training and education, but the idea is a mistaken one, for, great as these men undoubtedly were, they would have been greater yet had they been trained from the first.

In this connection the great Washington said in his last message to Congress:—

"Whatever arguments may be drawn from particular examples, superficially viewed, a thorough examination of the subject will evince that the art of war is both comprehensive and complicated; that it demands much previous study, and the possession of it, in its most improved and perfect state, is always of great moment to the security of a nation."

General Cullum, in the introduction to his "Early History of the Military Academy," gives similar testimony. He says:—

"Military education in schools or in the field has been deemed essential to the success of arms in all civilized nations, from the days of the early Greeks to the last decade of the nineteenth century. No truth is better supported by history than that victory, *ceteris paribus*, will perch upon the standards of those armies having the best instructed and most experienced officers. Education in the field being a luxury too expensive in blood and treasure for the safe reliance of a nation, military schools were long since established in all the countries of Europe, and the dear-bought experience of our Revolution proved the indispensable necessity of one in the United States."

In the same book we find the following quotation from Secretary James G. Blaine's "Twenty Years in Congress":—

"The value of strict military training was shown, during the rebellion of the seceding states, by the superior prominence attained in proportion to their numbers by the officers who had been educated at the West Point Military Academy. The wisdom of maintaining that institution was abundantly vindicated by the results of the war."

Surely such tributes as these amply justify the pride of our soldiers in their profession. I give below a brief mention of the number of men in our army at various times, and some of the great names associated with it.

SOLDIER-STATESMEN

The highest number of men enrolled in our army during the Revolutionary War was 89,761. In the War of 1812 we raised a regular force of 38,186, and a militia force of 471,622. In the Mexican War the total force raised, of regulars and volunteers, amounted to 101,282; and during the War of 1861–65 the volunteers furnished were 2,859,132, colored troops 186,017, and the regulars 39,273, making the entire number of men enrolled in the military service of the United States, during periods of war, about 4,000,000.

Of these, ten afterward became Presidents of the United States, namely, Washington, Jackson, William Henry Harrison, Taylor, Pierce, Grant, Hayes, Garfield, Benjamin Harrison, and McKinley. Other distinguished military men were nominated by one or another of the great parties, but were not successful in the election. Among these were Jackson, who was defeated in 1824, but was elected in 1828 and 1832; Harrison, who was defeated in 1836, but was elected in 1840; Cass, who was defeated by Taylor in 1848; Scott, who was defeated by Pierce in 1852; Fremont, who had been lieutenant colonel, defeated by Buchanan in 1856; J. C. Breckinridge, defeated by Lincoln in 1860; McClellan, defeated by Lincoln in 1864; Hancock, defeated by Garfield in 1880; and Harrison, defeated by Cleveland in 1892.

Other officers who had served in the army were candidates, namely: Armstrong, Lincoln, Burr, John Floyd, B. Gratz Brown, Green Clay Smith, James B. Weaver, and Benjamin Butler. Most of the successful candidates owed their elevation to their military record, and the same may be said, to a great extent, with regard to the prominence attained by others. Probably twenty of the generals of our

army earned what might be called world-wide distinction, and some two hundred, enviable national distinction.

There have been many other great rewards outside of politics, for the system and the discipline of the soldier have been qualities which have been of the highest usefulness when applied to great business undertakings. Many officers have achieved wealth and distinction at the head of engineering enterprises or in the management of companies and syndicates. While these were not so great in public honor, possibly, as the political successes, the soldier's qualities have meant much in a material sense.

THE SUCCESSORS OF WASHINGTON

Washington was the commander of the army during the entire period of the Revolutionary War, and was again commander at the time of the anticipated trouble with France, from July 13, 1798, until his death, December 14, 1799. The other commanders of the United States army were as follows :—

Josiah Harmar, September 29, 1789, to March 4, 1790;
Arthur St. Clair, March 4, 1791, to March 5, 1792;
Anthony Wayne, April 13, 1792, to December 15, 1796;
James Wilkinson, December 15, 1796, to July 13, 1798;
George Washington, July 13, 1798, to December 14, 1799;
Alexander Hamilton, December 15, 1799, to June 15, 1800;
James Wilkinson, June 15, 1800, to January 27, 1812;
Henry Dearborn, January 27, 1812, to June 15, 1815;
Jacob Brown, June 15, 1815, to February 24, 1828;
Alexander Macomb, May 29, 1828, to June 25, 1841;
Winfield Scott, July 5, 1841, to November 1, 1861;
George B. McClellan, November 1, 1861, to March 11, 1862;
Henry W. Halleck, July 23, 1862, to March 9, 1864;
Ulysses S. Grant, March 9, 1864, to March 4, 1869;
William T. Sherman, March 8, 1869, to November 1, 1883;

Philip H. Sheridan, November 1, 1883, to August 5, 1888;

John M. Schofield, August 14, 1888, to September 29, 1895;

Nelson A. Miles, September 29, 1895, to ———.

THE PROFESSIONAL MAN

The Navy

By ROBLEY DUNGLISON EVANS

[Robley D. Evans, naval officer, was born at Floyd Court House, Floyd county, Va., August 18, 1847. He went to school at his native place and later to the Gonzaga Classical School, Washington, D. C. He received his appointment to the United States Naval Academy in 1860, and entered the service in 1863, served with the West India Squadron and, later, participated in the attack on Fort Fisher, where he received two severe wounds, and was commissioned lieutenant in 1866, and lieutenant commander in 1868, his promotion to commander occurring in 1878. In 1891–92 he commanded the "Yorktown" at Valparaiso and, later, led the United States naval force in the Bering Sea to suppress sealing. He was made captain in 1893. During the Spanish-American War he commanded the battleship "Iowa," which was the first to discover the attempt of Admiral Cervera's fleet to escape from Santiago. His ship made at once for the Spaniards and remained in the thickest of the fight, at one time receiving the concentrated fire of the enemy. Captain Eulate, Admiral Cervera and his son, besides two hundred and seventy-six prisoners were brought on board the "Iowa" and received every consideration from its commander. In 1898 he was assigned to duty as a member of the board of inspection and survey, and in 1900 was advanced to the rank of rear admiral.]

The clearest call that a man's heart hears
  When the beat of the blood leaps strong like fire,
Is the call of the sea, through the circled years—
  A longing that may not rest nor tire.

—Charles Washington Coleman.

TO be a successful naval officer one must not only hear "the call," but have certain natural qualifications that will fit him for a sea life. Among these the most important is a love for the sea and the life of a sailor. A seasick officer, as a rule, can never do himself justice nor render efficient service. Therefore, unless the lad loves the sea, and is com-

fortable when afloat, let him give up all thought of a naval life. It is true that many naval officers suffer from seasickness and the hardships of a sea life, but they only discover this after their naval academy course is completed, and in most cases they feel that it is then too late to choose a new profession. They simply suffer, or draw their pay and wish they had never been born.

There are also a few officers who are lacking in all the seagoing qualifications who make themselves very useful on account of their scientific acquirements. I am not writing for this class, but rather for the youth who will make the average sea officer—not for the exceptions, in other words, but for those who make the rule.

The ability to command men is a natural gift, and one more necessary in the naval profession than in any other, because the naval officer actually commands his men all the time. He lives with them night and day, and is never out of the sound of their voices.

This ability to command or manage others is shown very early in life by most boys, and is usually accompanied by a more or less accurate judgment of character. Every thoughtful observer at college or school can detect the leader among the athletes, or the baseball nine, the football team, or in the eight-oared shell, and this leader has one of the strongest qualifications for the naval profession.

SELF-COMMAND FIRST

With this must also come the possibility of discipline —the nature to take discipline, and let it become second nature—for no man can command men who cannot command himself. The greater the spirit and self-reliance of the lad the better, provided always that he can command himself. The higher the temper and quality of the steel the better the spring becomes, but it must be a spring in order to do the duty required of it. To sum up, then, the natural qualifications which are necessary in one who hopes to become a successful naval officer we must count:—

First—Love for the sea and a sea life, with the perfect physical condition necessary to stand the hardships incident to such a life.

Second—Ability to control and command men.

Third—Disposition to acquire and retain discipline and knowledge.

Fourth—Manliness and honesty of character and devotion to duty and country.

Having decided on the navy as a profession, the lad will then face his four years at Annapolis, and he must be prepared for the hardest struggle of his life. The course of study and drill is the best of any university in the world, and naturally it is the most difficult to master. The discipline is strict and absolute, but is enforced with kindness and consideration by officers who have themselves submitted to it, and who know its value as well as the difficulty of acquiring it.

The necessity for instant and unquestioning obedience to orders and respect for authority are inculcated from the moment the candidate enters the academic limits, and in proportion as this lesson is learned life in the navy, or rather life in preparation for the navy, becomes easier. The dreadful "grind" of the books grows harder, of course, but the drills and exercises change from work to pleasure as their object and usefulness become plain. Perfect physical condition, the result of scientific physical education and training, makes life a pleasure, and the advantages of the academy in this direction are soon felt.

As the course progresses the effect of the "weeding out" process is apparent, and the class that entered over one hundred strong is gradually reduced until graduation day finds only thirty-five or forty—a band of brothers, perfect physically and mentally, strong in brain and muscle, ready to face and solve the problems of naval life.

The results of four years of hard work now begin to show, and the young man fortunate enough to have endured the ordeal enters on a life the advantages of which are varied and important.

He may serve his country in her most honored calling, and, if need be, die in defense of the flag he has been taught to hold sacred. Of all the advantages of the navy as a profession, this must be considered first and of greatest value.

Then may come the social advantages incident to his position and the uniform he wears. He will find, as he travels the world over, that all doors and all homes are open to him, and that he is a welcome guest in every social grade, from the palace of the ruler to the hut of the humblest native in some far-away clime.

This life afloat will be such as to develop all that is manly and good, and the *camaraderie* of his mess life will color all that comes after. He will find his level among his steerage messmates, and this level will not change as time goes on, nor will the friendships, strong and healthy, formed in those days ever die. All his young life afloat will be spent in close contact with the men who are some day to make his reputation for him when the supreme hour of battle comes, and he will learn to respect the manhood under their blue shirts. He will know, also, if he has correctly learned what the naval academy has striven to teach, how to "*get under the skins*" of these honest men behind the guns and gain their confidence and respect, so that he may manage them and make them happy and contented.

He will enjoy the advantages of travel and association with those of his own class and his own cloth without ever a fear that unworthy motives have a place in their lives. The ideal life for a man is that of a naval officer.

The Drawbacks of Naval Life

Of the disadvantages of the navy as a profession little can be said unless money-getting be considered as important. By money-getting I mean the accumulation of money beyond the necessities of life. To the man who has this in view the navy offers no place. The pay is sufficient to keep one from want, but nothing more. The only real disadvantages of the navy as a profession are the enforced absence

of the officer from his home and family while his children are growing and being educated, and his inability to make for himself a home. These are real, and must be seriously considered before the final decision is reached.

One other serious disadvantage should be mentioned, and that is the life of exposure and hardship—sleepless nights of anxiety are the rule after a certain rank is attained, and through all ranks the exposure to wind and weather, heat and cold, is common. But these have their counterparts in all walks of life where men lead real lives.

Of actual hardship there is plenty, but this tends to make real men of those who choose the navy as a profession. To stay on the bridge for thirty-six hours in a howling gale is a real hardship, but it is part of a captain's duty, and must be done. To stand at quarters during half a night in the tropics is a hardship after the excitement of the first half-dozen nights, but it is part of the contract, and must be met. To stand on the forecastle of a battle-ship all night, with the sea breaking ten feet over your head every few minutes, while the thirteen-inch guns swing from side to side, is surely a hardship; but every man is the better for it, and feels a justifiable pride when the five hundred tons of turret and guns have been mastered and secured so that they can do no further harm. Naval life is full of hardships, but naval men show the benefit of having stood those hardships. Every battle with the elements leaves its mark for good on the men who come, successful, out of it.

Opportunities in the New Navy

The chances of success and promotion for those who choose the navy as a profession are vastly increased by the passage by the last Congress of what is known as the navy personnel bill. Officers may now look for a steady flow of promotion in all grades, and the ambitious ones may hope to command before advancing years have lessened the self-confidence that gives young men the daring, by which in great measure comes the power to do so.

The provisions of the bill are such that a certain time only can be spent in each grade, and at a certain stated age an officer must have attained a certain known rank. In addition to this, the secrets of the engine room are no longer secrets, but every line officer may know them. The much-talked-of dangers and hardships of the engine room and the roaring furnaces, with their black and sweating fellows, will now be presided over by a line officer; and the former engineer, now happily a line man, will have a chance at the guns, and be allowed to face the biting gale.

For all hands, the new policy of our government, if such I may call it, promises much more active service, and that, of course, brings promotion in its train. If we are to do our fair share, among nations, of the police work of the sea, and maintain the position forced upon us by the results of the Spanish War, then our naval service must be greatly increased, both in ships and personnel. This means active work, and consequent promotion.

If the Spanish War has taught us anything, it is the vast and vital importance of sea power. Spain's splendid army of 200,000 men in Cuba was forced to surrender because the fleet of Admiral Cervera was destroyed off Santiago—because the sea power of Spain was destroyed, and she was helpless.

It is hoped that Congress now feels that if the United States had possessed a sufficient navy the war with Spain would never have come, and that the best guarantee for peace is absolute readiness for war—at least so far as naval defense is concerned; and that, feeling this, they will give the country such ships as actual experience shows we should have. When this is done, the navy as a profession will be more attractive than it now is, but to reap the full advantage of such wise and liberal legislation, time must not be wasted, and the preparation for a sea life should begin at once.

In conclusion, the personnel bill provides for the retirement, with proper compensation, of all those who have served the country faithfully. Not the least, by any means, of all the advantages of the navy as a profession is the cer-

tainty of compensation: the knowledge that a government check, small though it be, will certainly come at the end of each month is most comforting.

I might write much on the pleasures of a naval life. From the first donning of the uniform until the end comes our lives are replete with pleasure. We find in after years that the dreadful grind of academic life had its pleasures, though at the time we did not appreciate them. Life in the steerage, particularly in a large ship, is delightful—plenty of hard work, with no end of "dressing down" from division and executive officers, makes keener the pleasure of the hours off duty. Then the youngster feels that he is sowing his wild oats, and that is a pleasure to him and to those about him.

The Crowning Pleasure of Naval Life

But the true pleasure of naval life comes with the first command—the torpedo boat for the young ensign or lieutenant. To feel that you really know the little wasp, can make her do as you bid, and deliver her deadly sting to the battle-ship when the time comes, is worthy pleasure—the pleasure of responsibility and power.

With advancing years will come the position of executive officer, and with it the pleasure of knowing that by your knowledge of organization you make a great, complicated machine work perfectly, and that hundreds of men are happy and contented because you make them so. The man who has faced the gale knows better than any other the pleasure that comes with the calm, just as the one who has strained his eyes through an anxious night of blinding snow or fog, hearing his own heart throb at the sounds about him, knows better than any one else the pleasure that comes with the dawn and the blue sky.

After years of work and pleasure one may have the joy of saying to his captain: "You may fire when you are ready, Gridley"—or of publishing to his command after a great victory: "You have the gratitude and congratulations of

the whole American people. Convey to noble officers and crews, through whose valor new honors have been added to the American navy, the grateful thanks and appreciation of the nation ''—the words of the President to Admiral Sampson.

Surely the choice of the navy as a profession is a happy one for him who has heard "the call of the sea.''

THE PROFESSIONAL MAN

The Ministry

By NEWELL DWIGHT HILLIS

[Newell Dwight Hillis, clergyman, was born at Magnolia, Ia., September 2, 1858. His early education was secured at his native place and at Grinnell, Ia. At seventeen he served as missionary under the American Sunday School Union; but this labor was followed by further studies at Lake Forest University, where he graduated in 1884, and at McCormick Seminary, where his theological studies were completed in 1887. He began preaching at the First Presbyterian Church of Peoria, Ill., which he left in 1890, after a period of successful ministry, to go to the Presbyterian Church at Evanston. Four years and a half later he accepted the call of the Central Church, Central Music Hall, Chicago, to succeed Prof. David Swing, and throughout his four years there attracted great crowds to hear his preaching.

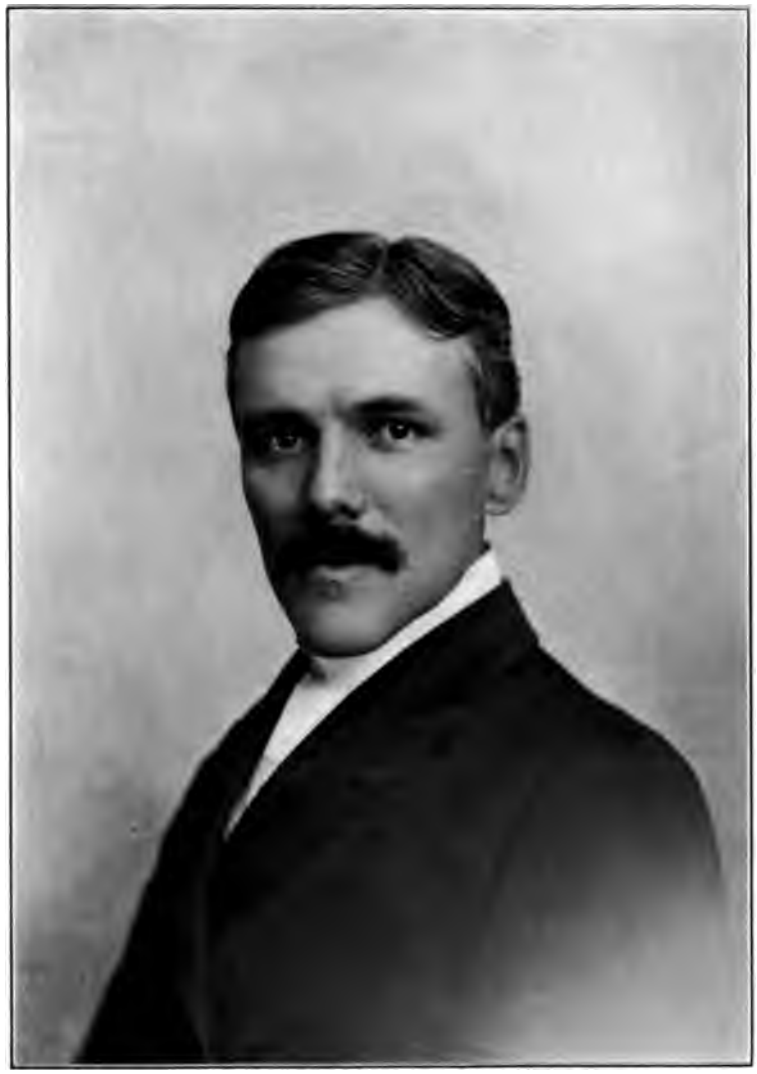
In 1899 he accepted a unanimous call to succeed Dr. Lyman Abbott in the pastorate of Plymouth Church, Brooklyn, and there he has continued the same success that marked his work in Chicago. In 1896 he published "A Man's Value to Society" and "The Investment of Influence." In 1897 appeared "Foretokens of Immortality," and in 1898 "How the Inner Light Failed." He is also the author of "Great Books as Life Teachers" and "Influence of Christ in Modern Life." As a lecturer he has figured prominently, having delivered "John Ruskin's Message to the Twentieth Century" many times.]

GREAT, indeed, has been the influence of war, politics, commerce, law, science, and government, yet we must also confess that the pulpit has been one of the great forces in social progress. Be the reasons what they may, the moral teachers of yesterday are the social leaders of to-day.

To-morrow, Moses will reënter his pulpit and pronounce judgment and control verdicts in every court of the city. To-morrow, as Germans, we will utter the speech that Luther fashioned for us, or as Saxons use the idioms that Wyclif and Bunyan taught our fathers. To-morrow, the groom and

bride will set up their altars, and, kindling the sacred fires of affection, they will found their home upon Paul's principle, "The greatest of these is love." To-morrow, the citizen will exercise his privilege of free thought and speech, and recall Guizot's words, "Democracy crossed over into Europe in the little boat that brought Paul." To-morrow, educators will reread the "Sermon on the Mount" and seek to make rich the schools for the little ones who bear God's image. To-morrow, we shall find that the great arts that enrich us were themselves made rich by teachers of the Christian religion. For great thoughts make great thinkers. Eloquent orators do not discuss petty themes. The woes of India lent eloquence to Burke. Paradise lent beauty to Dante and strength to Milton. It was the majesty of Him whom "the heaven of heavens cannot contain" that lent sublimity to the cathedral of Angelo and Bramante.

Christ's ideal of immortality lent sweetness to Handel, and victory to his oratorio. It was the golden rule, also, that shotted the cannons of freedom against the citadel of slavery and servitude. "The economic and political struggles of modern society," says the great English economist, "are in the last analysis religious struggles—their sole solution, the life and teachings of Jesus Christ set forth through the human voice." In his celebrated argument in the Girard College case, Daniel Webster reviewed the upward progress of society, and asked this question, "Where have the life-giving waters of civilization ever sprung up save in the track of the Christian ministry?" Having expressed the hope that American scholars had done something for the honor of literature abroad; that our courts of justice had, to a little degree, exalted the law; that the orations in Congress had tended to extend and secure the character of human rights, the great statesman added these words: "But I contend that no literary efforts, no adjudications, no constitutional discussions, nothing that has ever been done or said in favor of the great interests of universal man, has done this country more credit at home and abroad than our body of clergymen." Weightier or more unqualified testimony was never



NEWELL DWIGHT HILLIS.

pronounced. Whatever the future may hold for the pulpit, the past, at least, is secure!

The Influence of the Pulpit

Having affirmed the influence of the pulpit in early and ignorant eras, some writers now declare the pulpit has entered upon a decline, and predict its final decay. In this age of books and papers men question the need of moral instruction through the voice.

Thoughtful men are not troubled lest some agency arise to dispossess the pulpit. In the last analysis, preaching is simply an extension of that universal function called conversation. It represents an attempt so to bring the truth to bear upon conduct and character as to cleanse the reason, sweeten the affections, and lend inspiration to imagination; so as to strengthen conscience and refine the moral sentiment. The foundation of all moral instruction is in the family, where children are influenced, not by abstractions, but by the truth manifest in the voice of the father and the mother, who create an atmosphere about the child. Socrates came speaking, as did Plato and Paul, as did the world's Saviour; and so long as man remains man, preaching will remain, not as a luxury, but as the necessity of man's existence.

So far from books doing away with the influence of the voice, they seem rather to increase it. In ages when there were no books men sat silent in the cell or were dumb by the hearthstone. Now, when a new book is published, like the "Memoirs of Tennyson," or "Equality," by Bellamy, or "Letters of Robert and Elizabeth Browning," these books, instead of ending conversation upon the themes in question, seem rather to open into the floodgates of speech, so that a thousand readers who before were dumb and silent break forth into discussion. Great is the power of books! Wonderful the influence of the press! But the printing press is only a patent drill that goes forth to sow the land with the great seed of civilization. But while the drill may scatter

the wheat upon the cold ground, it may not pour warmth about the frozen clods or shed forth the refreshing dew or rain. When the living man called Luther, or Whitefield, or Wesley, or Beecher, or Brooks shines forth, then the mind lends warmth to frigid natures, calls down dew and rain upon the newly sown seed, and lends light and inspiration to dull and sodden natures.

It is indeed given to the printed page to teach the truth regarding axioms, or the nature of solids and fluids, but even then experiments in the laboratory strengthen the book. But, so far as moral truth is concerned, the truth is never the full truth until it is organized into personality, and flashes in the eye, or thrills in the voice, or glows in the reason, or guides through sound judgment. And so long as life is full of strife and conflict, so long as men are the children of misfortune, adversity, and defeat, so long as troubles roll over the earth like sheeted storms, so long as dark minds need light and inspiration, and the pilgrim band, floundering through the wilderness, needs a leader, and a pillar of cloud by day, and a pillar of fire by night, will religion remain the guide, the hope, the friend and support of the people.

The Grandeur of Preaching

Preaching is man-making, man-mending, and character-building. On the one side it is a science—the science of the development of all the powers, animal, mental, moral, and social; the subordination of the lower impulses to the higher faculties, the symmetry and harmonization of all. The genius of preaching is truth in personality. Mighty is the written Word of God, but the Word never conquered until it was "made flesh." Truth in the book is crippled. Truth in the intellectual system is a skeleton. Truth in personality is life and power. Always the printed philosophy is less than the speaking philosopher. Wallace and Bruce had their power over the clansmen, not by written orders, but by riding at the head of the host. By the torch of burning

speech Peter and Bernard kindled the ardor of the Crusaders. When to Luther's thought was added Luther's personality, Germany was freed. Savonarola's arguments were brought together in a solid chain of logic, but it has been said that his flaming heart made the chain of logic to be "chain lightning." The printed truth cuts with a sharp edge; the spoken truth burns as well as cuts.

Men have indeed been redeemed by the truth in black ink on white paper, but the truth quadruples its force when it is bound up in nerves, muscles, and sinews. The soul may be taught by travel, books, friends, occupation. Yet these truths stand in the outer court of the soul. It is not given to them to enter into the secret holy of holies, where the hidden life doth dwell. Preaching is plying men with the eternal principles of duty and destiny, to give warmth to the frigid, wings to the dull and low-flying, clarity to reason, accuracy to moral judgment, force to aspiration, and freedom to faith. Truth is the arrow, but speech is the bow that sends it home.

The nature and functions of preaching grow out of the divine method of education and growth for men. God governs rocks by gravity, bees by instinct, trees by those grooves called natural laws. Man governs his locomotive by two rails and a flange upon the side of the wheel. Man, made in God's image, is the child of liberty, and God governs the pilgrim host through moral teachers into whose minds great truths are dropped from heaven, and these men are sent on before the advancing multitude to lead them away from the slough, to guide them out of the wilderness and open up some spring in the desert.

It is possible to enrich dead things from the outside. Soft wood may be veneered with mahogany, nickel may be coated with silver, and silver plated with gold, but living things must be developed from the inside. Would the husbandman have a rich flush upon the rose? Let him feed the roots. Would the mother have the bloom of beauty upon the cheek of the child? Let her feed the babe with good food, and the pure blood on the inside will lend the

rosy tint to the cheek on the outside. Men cannot be made wise or strong or moral by exterior laws or agencies. The great spiritual principles of Jesus Christ are the most powerful stimulants to material civilization that the world has ever seen.

It is said that Shakespeare's poems bring thousands of visitors to Stratford every year. His poems indirectly have created more wealth for the people of Stratford than any of its factories or looms. It is still an open question whether Wyclif, with his translation of the Scriptures, has not done as much for the commerce of England as did Watt when he invented the tools that Wyclif had first made necessary. Shaftesbury once said that Charles Spurgeon, without discussing problems of government, had done more for social reform and progress than any statesman of his era.

The Difficulties of Preaching

In his Yale address, ex-President White lamented that young men were turning from the learned professions to enter trade and commerce. Materialism, he thought, was an evil spirit that had given its cup of sorcery to youth and beguiled them from the paths of noble scholarship and the intellectual life. Gone the poets Longfellow, Lowell, Bryant, Whittier. Gone the historians Bancroft, Motley, Prescott. Gone the great orators and statesmen. Gone also the era when young men like Channing and Starking, Swing and Beecher and Brooks, entered the ministry. And remembering that in New England the clergymen have founded the academies and colleges, and that in scores of families like the Emersons there had been seven generations of clergymen who had wrought in the pulpit, the lecture hall, or taken up the pen of author or editor, the great educator predicted disaster would befall our eager American society.

But not the emoluments of commerce alone explain the drift of young men away from the ministry. The ministry is not an easy life. No profession makes demands so numerous or so stern upon nerve and brain, upon mind and

heart. In former times, when books were scarce, religious newspapers unknown, and knowledge was not universal, preaching was not a difficult task, and it was easily possible for a clergyman to preach a sermon three hours long in the morning and repeat it at night without the congregation recognizing it. Now all the hearers have books and libraries, and the pew of to-day is wiser than the pulpit of yesterday. The time has come when the preacher must be a universal scholar. He must make himself an expert in social reform; master the facts as to illiteracy, vice, and crime; study the tenement house question; all social movements in connection with settlements and methods of Christian work. He must carry his studies into physiology and hygiene to note how abnormal physical conditions affect the conscience and the spiritual state.

He must study history, politics, the rise of law, and free institutions, the movements of art, the history of philosophy, and, above all else, no facts in connection with science must be permitted to escape his notice. For his illustrations he must draw from the sciences of stars and stones and animals and plants. To keep step with his work he must read each month some review that deals with finance, reform, labor, education, and his own special problems, not forgetting the foreign quarterlies and magazines. In addition to all this there will be at least a hundred volumes each year that he must go through thoroughly, if possible, or hurriedly, if crowded. There are also public duties and demands. To-day he enters a home in which some woman, with little children clinging to her dress and crying bitterly, stands beside a young father, now dying. He returns home to find some youth, the child of poverty and orphanage, but of genius also, who needs help and assistance. When evening falls there comes the intellectual stress and task.

Immeasurable the demands upon nerve and brain! Now and then one arises who is called to the ministry by his distant ancestors, whose father loved moral themes, and had a vision and the outlook upon the realm invisible, whose mother had enthusiasm, imagination, and moral sentiment—

gateways, these, through which God's angels come trooping —and father and mother, through heredity, call the child to the ministry. For such a one teaching is automatic, and preaching is instinctive, and the work itself is medicinal and recuperative. But even upon these men, like Robertson and Channing and Bushnell, the mere strain of delivery is such as to send them home from the pulpit in a state of nervous collapse from which they do not recover until Tuesday or Wednesday. With many the recoil dismounts the cannon. In these days no man would be equal to the difficulties of the ministry did not the happiest of the professions bring its own rewards, carry medicine to cure its exhaustions.

Freedom of Thought in the Pulpit

No other occupation or profession offers such liberty and personal freedom. The politician is a thread caught in the texture of his party, and has little freedom. The merchant must buy and sell what the people want, and must serve them. The lawyer must move in the groove digged by the mistake or sin of his client, while the clergyman is freely permitted to teach the great, eternal principles of God, and he steers by the stars.

Great is the power of the press; but the press writer has no personal contact with the reader, and he must often report things evil as well as good. Great is the power of the law. But law is litigious, and the jurist must struggle oftentimes for weeks or months to settle some quarrel, or correct some injustice, dealing, as Webster said, with negatives oftentimes. Great is the power of the physician. But, unfortunately, in influencing his patient his personality must first of all work upon an abnormal condition, and when the patient is restored to health and ready to receive the physician's personality, his task is done. In the ministry this advantage adheres. It emphasizes the great positive moralities, it handles the most powerful stimulants the world has ever known—eternal truths. It plies men with divine

inspirations. It deals with the greatest themes life holds—God, Christ, conscience, reason, sin, salvation, culture, character, duty, immortal destiny. When all other arts have been secured, it teaches the art of right living. When all other sciences have been mastered, it teaches the science of right conduct in the home, the market, and the forum. It puts its stamp, not into wood that will rot, not into iron that will rust, not into colors that will fade, but into minds and hearts that are immortal.

Multiply the honors and emoluments of the other occupations a hundredfold and these need them all to compensate for the happiness and opportunity of the Christian ministry, seeking to make the church a college for the ignorant, a hospital for hurt hearts, an armory from which man may receive weapons, that opens up springs in life's desert, plants a palm in life's burning sands.

Well did John Ruskin say that the issues of life and death for modern society are in the pulpit. "Precious, indeed, those thirty minutes by which the preacher tries to get at the separate hearts of a thousand men to convince them of all their weaknesses, to shame them for all their sin, to warn them of all their dangers, to try by this way and that to stir the hard fastenings of the doors where the Master himself has stood and knocked, yet none opened, and to call at the openings of those dark streets where Wisdom herself hath stretched forth her hands and no man regarded. Thirty minutes to raise the dead in."

And he who hath known the joy of encouraging some noble youth who is discouraged, the rapture that comes when at least one who hath been long snared and held in the cruel trap hath been freed, the joy of knowing that blind eyes have come to see things unseen, and deaf ears to hear notes that once were unheard, or hath swung wide some dungeon door to lead forth some prisoner of conscience, will know that there is no profession that conceals such hidden springs, receives such hidden messages, is fed with such buoyancy and happiness as the ministry.

THE PROFESSIONAL MAN

The Doctor's Calling

By GEORGE FREDERICK SHRADY

[George Frederick Shrady, physician, was born at New York, January 14, 1837. He passed through the College of the City of New York and took his professional training at the College of Physicians and Surgeons, graduating in 1858. He served as assistant surgeon in the Union Army during the Civil War, and at its close entered upon his professional career in New York City. Among his distinguished patients was General Grant, whom he attended as consulting surgeon during his last illness. Besides a large practice he devotes much time to his duties as consulting surgeon in several New York hospitals. He is editor of the "Medical Record."]

NO profession offers such great opportunities to the young man of to-day as that of medicine. In choosing it, the aspirant for medical honors may be cheered by the probability that many of the greatest discoveries of medical science will be made within the next twenty-five or thirty years.

In the quarter of a century that ended with 1898 there was much greater progress than in the hundred years preceding. Progress has been measured by the advancement of the standard by which the student has been measured, and that standard is vastly higher to-day than it ever was before.

No restrictions hem in the student of medicine nor the practitioner. The lawyer is governed by previous decisions. If he advances a new and perhaps striking argument, the judge says that his plea may not be allowed, that So-and-so has decided so-and-so, and that precedent governs. Or, if

his case is before a jury, the judge is very likely in his charge to make a similar statement to the "twelve men good and true." Thus, no matter how clever his argument, how wise his belief, how potent his facts, he must abide altogether by what some one else has said, or what some one who is higher in authority than he believes should be done.

The medical man is counsel, judge, and jury, all in one. He is his own bishop, his own judge. There is no creed for him but that which is embraced in the words experience, common sense, and humanity, combined with what medical science teaches him, without in any way fettering him. The world of progress is his. The fact that any other doctor or surgeon has declared thus and so regarding a disease or operation need in no way restrict him. If he has discovered anything better and can prove it, his comrades of the profession are ready to join hand and voice with his in letting the world know what has been achieved.

HARD STUDY AT THE START

A classical and scientific education, besides the knowledge gained in the medical college, is an absolute necessity to future success in medicine. It is the groundwork that must not be neglected. Time was when the boy could step from the plow or the carpenter's bench into medicine, but that state of affairs has gone forever. To-day the young man who has the medical profession in view should enter college so that he can graduate before he is twenty-five. Then he should take a four-years' course at a first-class medical college. If he can, after that, he should spend two years in hospital, and if possible two years more in study abroad. Then he can come back ready to begin practice.

Only a small proportion of the young men who constitute the future physicians and surgeons are of sufficient means to gain all this knowledge. It requires struggle and hardship. It is adversity that brightens us, that furbishes our brains, that makes us put our best foot foremost. It is the heel to

side and whip to neck that makes even the thoroughbred lengthen his stride.

The young man who would succeed in medicine must be willing to barely keep body and soul together, if necessary, in order to gain that absolute requisite—an adequate education. There will be a thousand things happen to discourage him, and even when he has reached that step in his career that permits him to put out his shingle and declare to the world that as an M.D. he is ready to begin business with it, the outlook is often, to him, anything but alluring.

I remember well, a great many years ago, when I was busy with my hospital duties in New York, the thought came to me one day: Here I am, twenty-seven years old, nothing accomplished in the way of provision for the future, no reputation. My life is a failure.

I had this thought to comfort me then: I must simply learn to work for the work's sake, and leave the future to take care of itself. I was discouraged, and it seemed to me as if I had wasted the best part of my life, but I kept on, and I have never been sorry for it.

In the days when I was a young doctor came the Civil War, and that gave a lot of us young fellows a chance to learn such as it was impossible to gain in any other way. I got a hospital position as one of the surgeons, and I well remember the pride I felt when I looked down at the stripes at the side of my trousers, at the evidence of rank on my coat, and thought of the "U. S." on my cap. How proud I was when I would ride up to the hospital on my spirited horse and the soldiers would salute me!

Those were the pleasant facts that stood out in bold relief beside the suffering and death that were around us, the emergencies that were to be met, and the responsibilities to be borne. But we did the best we could under the circumstances. Wide as that experience was, the medical student of to-day who takes a course at a first-class city hospital will practically learn very much more than we did in the old days.

The young men who thoroughly fit themselves for the

practice of medicine in the future will start in where the war doctors ended. But they will have more to contend with. The public expects more of a doctor to-day than in the times when practically nothing was known of true aseptic surgery. Mistakes will not be tolerated now that once went unquestioned. This is the day of the specialist in medicine, but that fact does not release the doctor of the future from the obligation that rests upon him to be a thoroughly educated, all-round man.

When the young doctor has gained the stage of first practice his real professional struggles and hardships begin. No matter how well grounded he may be, he must make a start, and the meed of his success will be in accordance with his ability to grasp opportunities, and where his horizon line is.

Great Opportunities

To the broad-minded young doctor with brains and with the right sort of ambition all things are possible, and it is a fact that cannot be gainsaid that the measure of fame allotted to medical men is governed by their ability to grasp opportunities, by their breadth of vision. Fame comes to the doctor whose vision is limited only by the world, and the lesser mediocrity falls to him whose little world lies within the section encompassed by a few streets.

The young doctor's first patient should be his friend, if that be possible, for it should never be forgotten that this is the first of the world's inhabitants who is willing to trust him and to pay him for taking up the fight against death and disease.

My first patient is my patient still. When I was house surgeon in the New York Hospital, a relative of his father was brought there and treated by me. Afterward, when I opened an office, this man came to me and brought his sick son, saying that I had cared for his relative so well in the hospital he had made up his mind that, when I began practice, if any of his family fell ill he would call me to attend them.

The boy grew up, and has never since wandered after strange gods. He is living to-day. His father, who brought him to me, is now a grandfather, old and infirm, but he is also my patient. He lives in the top of a six-story tenement on the East side of New York. He comes to see me, and I go to see him, and no greater pleasure is mine from the case that carries with it the largest fee than I always feel when I have been able to be of aid to this man who first trusted me with his son's health. He is very poor now, but neither he nor I think of fees any more.

When the young doctor stands on the verge of practice, two fields of labor lie before him. One is the country, the other the city. He has the comfortable knowledge that success means a fairly good living in either; that judged side by side the advantages are very nearly equal.

If he chooses the path that leads to a metropolitan practice, it is safe for him to calculate that the most moderate success means an income of $2,000 a year. If he becomes a country medico he is almost positive of an income of $1,200, because that is the average. In the city it is likely to be five years before he more than earns his expenses. In the country that happy position may be his in two years' time, if he is economical.

City or Country

In the country, it is more than likely that he will have less struggle and hardship in gaining a foothold, for he is sure to become better acquainted and to have much less competition. Then, again, it is always possible for him to shift the responsibility by suggesting that some famous metropolitan doctor be consulted, or that the patient be sent to a hospital or sanitarium. He is not supposed to have the constant advantage of practical example with which the city man must of necessity always be in touch. Then, again, he does not have to contend with the meretricious free dispensary system, which tends so surely to rob the young city doctor of what should be his first earning of small fees.

The city doctor must, as a rule, encounter a dozen rivals where the physician of the country has few, or perhaps none at all. He must keep up the appearance of prosperity, although the nose of the wolf is snuffing at the very crack of his door.

He must have a well-furnished office, for the public must never be permitted to imagine for an instant that he is not prosperous.

He must dress well, know all that is going on in the metropolitan medical world, be well up in dispensary and hospital work, and be able to cope with any claims of superiority made by other physicians in his neighborhood. His struggles and hardships are none the less onerous because concealed. His brother of the country knows little of this. His living expenses are much less, and if his returns from practice are not so great, he soon becomes known and gains his friends.

The young man who chooses medicine as a profession will do well to remember that the physician is the public educator of the future in great measure. Advanced as he must be in science and all that appertains to the foundation of a classical education, he is ever a student, always a leader.

In every minor town the doctor ranks with the clergyman and the judge. His opinion is sought. His word is not questioned. His advice has a mighty influence on the lives of hundreds. Every one he meets speaks to him. His sphere of personal influence is wide. Much of this is not vouchsafed the equally competent city doctor.

The leaders of medical science of the future are the unknown students of to-day. We cannot all be Harveys, Jenners, or Listers. Many are called, but few are chosen. After all, it is not necessary to be great to be good. The profession of medicine needs honest, careful, conscientious workers, each one of whom can be a hero in his own way.

The man who makes of medicine a trade is both a professional and business failure. Success can only be gained

by hard, persistent effort, with as little thought of money as possible. Mere money to the true physician is only the means whereby he can help to gain the great ends of high calling. When pecuniary success comes to him it is tribute, not pay for his professional services.

THE PROFESSIONAL MAN

Science as a Profession

By NATHANIEL SOUTHGATE SHALER

[Nathaniel Southgate Shaler, dean of Lawrence Scientific School and professor of geology at Harvard, was born at Newport, Ky., February 20, 1841. He was educated at Lawrence Scientific School, Harvard, graduating in 1862, taking the degree of Sc.D. in 1865. He joined the Union Army during the Civil War, serving for two years as artillery officer, after which he entered upon his scholastic duties at Lawrence Scientific School, serving from 1868 to 1872 as instructor of zoölogy and geology. In the latter year he was made professor of paleontology, and held that chair until 1887, when he was transferred to the chair of geology in Harvard. From 1873 to 1880 he was Director of the Kentucky Geological Survey, devoting a part of each year to that work. Since 1884 he has had charge of the Atlantic division of the U. S. Geological Survey. He has published the following books: "A First Book in Geology"; "Kentucky, a Pioneer Commonwealth"; "The Nature of Intellectual Property"; "The Story of Our Continent"; "The Interpretation of Nature"; "Illustrations of the Earth's Surface"; "Sea and Land"; "The United States of America: a Study of the American Commonwealth"; "Fossil Brachiopods of the Ohio Valley"; "American Highways"; "Features of Coasts and Oceans"; "Domesticated Animals: their Relation to Man"; "The Individual: Study of Life and Death."]

WHEN a young man is considering the choice of a profession it is a matter of the first importance that he should know what are the chances of employment in the vocation he may be inclined to follow. In the long-established professions these conditions are most likely known to him, or may be learned from any well-trained physician, lawyer, or clergyman of his neighborhood. It is otherwise with such callings as engineering, mining, architecture, and landscape gardening, in which suitably trained men may find honorable and well-paid work in applying the principles and

practice of natural science. It is likely that the youth may not know men who are thus engaged, and so he needs to seek information from those persons who have charge of technical schools or of their departments, and who understand what are the chances of employment for their graduates. For many years I have been engaged in supervising the education of young men who are making themselves ready for places where they can apply their training in science; in finding positions for candidates; and in noting the conditions of their general success and of their occasional, though rare, failures. I have had at the same time a fairly good opportunity to compare the fortunes of graduates in the ancient professions with those of men who have entered on the newer walks of life. The result of these observations may be briefly set forth as follows.

In case a young man of fair ability, industry, and such measure of health as will enable him to win his value, is by his nature inclined to give his life-work to some one of the dozen or more scientific callings, he may enter upon that career with the assurance that his opportunities of employment will be at least as good as in any of the ancient professions: divinity, law, or medicine, or in that other profession, commonly known as "business." As regards the chances of places and salary at the time of graduation they are distinctly better than in other callings. For some years none of the graduates of the Lawrence Scientific School who followed any of the programmes of study which relate to definite employment have failed promptly to obtain positions. The pay they at the beginning receive is in most instances small, but with the exception of those who enter the service of the great electric and other corporations it is sufficient to support an economical person.

In general, it is from $50 to $80 a month. In many instances, a yearly increasing number, students begin to arrange for employment in particular mines, manufactories, or government scientific corps two years or more before their graduation. Slight variations in their schooling, together with the use of one or two summers in special preparation,

make them the better fitted for their work and so their novitiate is much shortened.

Science as a Livelihood

As for the eventual remuneration of the man of applied science in terms of money or station, it depends, as in the other professions, on his capacity and in some measure on the chances of life. There is a common notion that the larger pecuniary rewards do not come to the engineer, but are for the lawyer or the man who gives himself to commerce, manufacturing, or banking. In my observation this has not been the case, for the most distinguished instances of pecuniary success among the many who in my time have graduated from Harvard have been among the relatively few who have devoted their energies to the economic application of what has been termed the new learning. It is likely that for a long time to come men trained to win values from the earth, and with capacity for the hard labor such work demands, will find their profit therefrom.

Though the question as to the amount of money which may be had from a man's life-work is certainly important, it is less so than the larger questions as to the place among men his calling promises to give him and its effect on his character. As to these matters it may be said that while all learned employments which are helpful to mankind help those who follow them to dignified stations in life and develop their character, those which are concerned with natural science have a peculiar advantage in that they deal more with the actual world than any other. The engineer in any of his manifold varieties of action tests and enlarges himself by his contact with nature. The development he thus obtains is much like that of the commander in active war. In fact, engineering is a war with the elements and the natural forces, and both forms of combat seem to bring out the strength that is in a man—that strength which always receives the ready recognition of his fellows.

Young men who are considering what profession to follow

are seldom so fortunate as to have a bent so decided that they do not have to ask themselves whether they are fitted for this or that kind of work. Even when their capacities are of high order they have to look for a sign to tell them what to do. So far as I have been able to determine from many hundred conferences with youths on this matter, it may in general be said that the following indications have value in indicating whether or not it is well for a person to concern himself with the earth sciences.

Outdoor Life

If the questioner can make sure whether he is at his best under a roof or in the open air he may help himself to a determination. In general, the men suited to be engineers, geologists, or miners are of the out-of-door type; such as are at their best in vigorous contact with the earth. There are exceptions to this as to all other rules for gauging people, but the point has value. Again, in a like general way, a decided incapacity for mathematics may be taken as an indication that a person is not suited to a career in applied science. In all branches of engineering the power to use the calculus for computations is almost indispensable. No young man, unless he has remarkable capacity for invention, can expect to rise in the profession without a fair command of that branch of mathematics. In chemistry, geology, and other natural sciences where elaborate computations are not demanded, less mathematical knowledge will serve; but in them all, even when the forms of reasoning are not followed, the quality of the thought required is of the same exact character. Therefore it may be assumed that a dislike for this subject makes it doubtful whether a person should seek a career in the field of natural science. It must be said, however, that some men of distinguished ability in this field have won their success without any knowledge of mathematics beyond the merest elements of the subject. But in all such instances these masters have been very strong in the other qualities called for in their work.

GETTING INTO HARNESS

There is a common notion among young men who propose being engineers that they should, as soon as possible, set about the practical work of their profession; that a long preliminary training hinders rather than helps their advancement. There is no doubt that a youth with a high school training and quick wits can in many branches of applied science quickly earn his living. Thus, in electrical engineering, he may in a few years find himself a trusted lineman or in charge of a small plant; but there he finds his progress at an end, because he does not know his subject, but only certain of its minor details. Unless he has remarkable talent and a great capacity for teaching himself he will rise no higher in his profession. The distinguished successes I have known have been altogether among men who took pains to obtain an education such as developed their general capacity to the utmost, without much regard to the practice of their art until they were completely prepared for it. Asking a graduate of the Lawrence School who has attained to very distinguished success as a mining engineer, what feature of his schooling had been most helpful to him, he answered in effect that his greatest advantage had come from the fact that he had received no instruction in those details of his profession which are properly learned in practice; that all his time had been spent on those necessary studies which could not be acquired in the routine of his employment.

There is one other point concerning the conditions of a career in technical science which needs to be stated. This is as to the time of beginning the studies which relate to the profession. While it is well that every young man should be trained in a college before he enters a technical school, it is very important that he should begin this professional part of his training with physics and advanced mathematics not later than his sophomore year, and that all through his college course, while seeking the general culture it affords, he should have his main purpose in mind and give it fit con-

sideration. By this method a diligent student of fair ability should be able to obtain both his college and his technical degree in five, or at most six, years after he enters as freshman. Otherwise his work may cost him seven, or even eight, years of his precious youth. Moreover, in all branches of natural science it is well for a young man to begin if possible not later than the nineteenth year, for thereby the peculiar habits of thought which are needed are formed while the mind is still plastic. At two-and-twenty, if untrained, the mind is often too rigid to be at its best for such work.

THE PROFESSIONAL MAN

The Young Lawyer

By ALBERT J. BEVERIDGE

[Albert J. Beveridge, United States Senator from Indiana, was born in Ohio in a farming community on the border of Adams and Highland counties, October 6, 1862. At the close of the war he removed with his family to Illinois, where he attended school at Sullivan. His school days did not begin, however, until after several years of hardships and difficulties, during which he worked as a plowboy, a railroad laborer, a logger, and a teamster. He read law in the office of Senator McDonald and later became the managing clerk. After being admitted to the bar he continued his associations with McDonald and Butler until he began practice for himself. His reputation as a lawyer was increased by his connection with many well-known cases; at the same time he developed as an orator and campaign speaker until chosen in 1899 by the Republicans of Indiana to represent them in the Senate.]

IT used to be a part of the creed of a certain denomination that a man should not be admitted to the ministry who had not received his "call." It was necessary that he should hear the Voice speaking with his tongue, and saying: "Woe is unto me, if I preach not the Gospel."

This is true of the profession of law. So, at the beginning of your beginnings, do not begin at all unless you see a certainty of misery if you do not. Unless you are convinced that you would rather work, toil, nay, slave for years to secure recognition in the law, than to be honored and enriched in some other occupation, do not enter this profession of supreme ardor.

And above all things, do not enter it if you expect to practice law principally for the purpose of making money. It is *not* a money-making profession. The same effort,

acumen, and enthusiasm expended in almost any other occupation will bring you financial returns tremendously out of proportion to your most successful compensation in the law, measured by mere money. The money-making conception of our profession is not only erroneous but ruinous. For you must remember, to begin with, that you are practicing the science of *justice*.

If possible, get a thorough college education before you touch a law book. If you can get a college education, do not "read law" while you are at college. If you go to college, do not take what is known as the "scientific" course or "physical" course. Take the classical course. Next to geometry and logarithms and the Bible, the best discipline preparatory to making you a lawyer is the translation of Latin. It is the most logical language the world has ever seen, or is likely ever to see. After you get your college course, *then* go to a thoroughly first-class law school. After this, spend two or three years in active work in the office of some successful lawyer who has lots of practice and who will load off on your shoulders as much work as possible.

If you cannot go to a law school, your training in the law office will do you nearly as well. You can get along without your law school, but you can never get along without your training in the law office.

But if you cannot get a college education—(but this is nonsense; you can if you *will*; there is not a boy in America who cannot have a college education if he *will*)—do not get discouraged. It is possible that you are an Abraham Lincoln, or a John Marshall, or some person like that; and if you are you will succeed anyhow. If you have to choose between a law school and a college education, take the latter. But by all means do not miss the opportunity for training afforded by a clerkship in an active lawyer's office.

If you can be so fortunate as to get the firm or attorney with whom you are studying to let you draft pleadings, take depositions, examine witnesses, make arguments to court and jury, get out transcripts for appeal, write briefs, petitions, motions, and all the rest of that careful and painstak-

ing work which makes the daily life of the lawyer, you will equip yourself for actual practice better than in any other way I know of.

A Servant of the Law

Never forget that you are a sworn officer of the law quite as much as is the judge on the bench. It is impossible for you to put your ideals of your profession too high or attach yourself to them too firmly. I am no admirer of the acidulous character of John Adams (not that he was not both great and good, however), yet he announced a great thing, and lived up to it, when he declared that he was practicing law for the purposes of justice first and a living afterward.

"Never take a case," said Horace Mann, "unless you believe your client is right and his cause is just." On the contrary, Lord Brougham declared that "the conscientious lawyer must be at the service of the criminal as well as of the state." And this great lawyer proceeds to argue with characteristic ability that it is as much the duty of the lawyer to work hard for the cause that he knows to be wrong as for the cause he knows to be right. The reason, briefly, is that it is the very essence of justice that every man shall have his day in court; that the attorney is but the trained and educated mouthpiece of his client; and that to refuse the cause of a client in which the attorney does not believe is to relegate all the controversies to the judge in the first instance, which, of course, would render the administration of practical justice impossible.

This is the prevailing practice of our profession, and it is a serious thing to question its correctness. Its ethics are as wide as they are ingenious, and when one beholds them through the medium of the great Englishman's wonderful argument they seem radiant with aggressive truth. Nevertheless I am almost of the opinion that Horace Mann was right. It is certain that in his beginnings the young lawyer ought to lean to that view. If you consider it your duty to take any side of any case that offers, right or wrong, it is no

far cry to considering it your duty to *make* the cause you have espoused a good one before the court. And when that conception has shot its roots and filaments through your brain and conscience, the suggestion to your unscrupulous client of facts that do not exist, and all the alluring infamies of sharp practice, are possible.

Play Fair Always

It is said that burglary exercises such a fascination that, once the delirium of its danger is tasted, a man can never put that fatal wine away. An old and distinguished lawyer once told me that one of the most brilliant young lawyers he ever knew said to him, at the conclusion of a legal duel in which he had resorted to the sharpest of sharp practice and won: "That was the most delicious experience of my life."

Yes, and it was the most fatal. He became, and is, an attorney of uncommon resource, ability, and success, with many cases and heavy fees: nevertheless his life is a failure, for his profession and even his clients know him for a dealer in tricks. Senator McDonald, an ideal lawyer in the ethics, learning, and practice of his profession, told me that one of our justices once said to him of a certain great corporation lawyer of acknowledged power and almost unrivaled learning: "Mr. —— would be the greatest lawyer in the world if he were not a scoundrel. As it is, I brace myself to resist him every time he appears before me." One of the ablest circuit court judges of the federal bench said almost precisely the same thing to me of the same man. It does not pay to be understood to be capable, or even great, in the wrong. In time it means ruin; and therefore, from the low point of view of your mere material success, I think on the whole that it would be wise for you never to take a cause which, after you have a full statement from your client, you believe to be wrong.

Tell your client that he is wrong; show him why; induce him to compromise and to settle if he ought. If he will not

ALBERT J. BEVERIDGE.

because he is obstinate, he will probably lose his case anyhow, and of course blame his lawyer for the loss. So that if you do not have that case you have lost nothing. On the other hand, you have gained. The client will say: "If I had followed his advice I should not have had the expense and humiliation of defeat." In ninety-nine cases out of a hundred the honest client will respect you for your position. If the client persists in his course because he is a scoundrel, then, doubly, you cannot afford to take his unjust case. After a few years of such practice you will have acquired a moral influence with court, jury, and people which will be, even from a money point of view, the most valuable asset in your equipment. And you will be surprised to find how little you will lose, in the way of fees, by this course.

There is a great class of cases in which the correct application of the law is very doubtful, with lines of decisions on both sides; as, for example, in cases of the distribution of funds of an insolvent corporation, constitutional questions, and the relative equities of conflicting interests. These are fair examples of controversies where a lawyer may rightfully and righteously accept a retainer upon any of half a dozen sides. But in the ordinary course of practice perhaps it is better to stick to Horace Mann rather than to Lord Brougham, and reject employment in a case you know to be wrong.

VALUE OF SERVICES

While the law is not a money-making profession, either in theory or practice, the young lawyer should begin by charging every cent his services are worth. It is not only degrading, but reveals a base attitude of mind and character to charge a little fee in the beginning as a bait for a bigger one in future cases. Maintain the dignity of your effort. I am assuming that nature began the work of making you a lawyer before you were born; that you have been preparing yourself with the enthusiasm of an artist and the passion of professional devotion for the work of your great calling, by years and years of discipline and study such as no other

calling requires; that, with your natural qualifications and your general equipment, you are bringing to your client's particular case an industry that knows no limit in his immediate service.

This being true, tell him frankly that you propose to give him the best that is in you (and that best is your very life—no less—for you write "victory" at the end of every one of your cases with your heart's blood; or "defeat," if you do not win), and that for this best which is in you you will charge the highest professional fee justified by your services and the magnitude and difficulty of his case.

At the same time, never turn a poor client away from your office door because that client comes with no gold in his hand. When a lawyer is too busy to give counsel without fee and without charge to a poor man or woman, that lawyer has too much business. I know—we all know—of very eminent lawyers constantly engaged in causes involving large interests, who nevertheless find leisure, many times each year, to serve by advice and counsel, and even by the active conducting of cases, numbers of the children of poverty, and to serve them without a penny of compensation.

Be very careful of the class of practice you accept at first. I knew a young lawyer who had just opened his office, and, within a month, by one of those accidents that occur to every attorney, he was offered a case on a contingent fee in which the probability of a very high reward amounted to almost a certainty. He needed the money—was almost penniless. He was newly married, had no clients and few acquaintances; but it was not the class of practice to which he wished to devote his career. He courteously declined the case as though he had been a millionaire, directing his would-be client to an attorney who would care for it properly. Out of that case the latter attorney, by a compromise, in two weeks made $1,500. Nevertheless the young man was right, and acted with a farseeing wisdom as rare as the courage which accompanied it. Of course I assume that you are going into the profession for the purpose of becoming a great

lawyer, and not a mere conductor of legal strifes. If you are, you must deny yourself.

I do not mean by this that you should decline small cases. By no means. Take a $5 case and work with the same sincerity that you would on a $50,000 case. "Despise not the day of small things." In selecting your business, I refer to the quality and not the magnitude of cases. Again, again, and still again, this counsel: Care for your small case with the same painstaking labor which you bestow upon a large one. Never lose sight of the fact that your greatest reward is not your fee, but the doing of a perfect piece of work. The same fervor and ideality should govern your labors in a lawsuit that inspire and control the great artist and inventor. Frederick MacMonnies, the sculptor, said to me one evening: "I wish the matter of compensation could be wiped out of my consideration. I must give it attention for obvious reasons, but it is the matter of least moment to me, and has absolutely no influence upon my work."

Doctor Barker, the new occupant of the chair of anatomy in the University of Chicago, who has won for himself a permanent place in the high seats of his profession by his work on neurology, was in a company of gentlemen one evening. Said one of his admirers: "Why don't you go into practice? You could easily make a great fortune before you are forty."

Listen to the answer: "Money does not interest me." We all remember Agassiz's famous: "I must decline, gentlemen; I have no time to make money." That was why he was Agassiz.

Higher Rewards than Money

Quite as lofty ideals should inspire the work of those who make their vows to the greatest of all sciences, the science of justice, and the greatest of all arts, the art of adjusting the rights of men. No lawyer can become great who does not resolve at the beginning of each case to make his conduct of it a perfect piece of work, regardless of compensation. John

M. Butler, the partner of Senator McDonald and one of the greatest lawyers the central western states ever produced, was so careful of pleadings and briefs that he would not endure a blurred or broken letter, and bad punctuation was a source of real irritation to him. Hundreds of times have I, as his clerk, required his printer to take out a blurred or indistinct and broken letter!

It was Mr. Butler's high ideal to achieve perfection as nearly as possible. The most perfect legal argument I ever heard was made by the Hon. Phil. C. Knox, of Pennsylvania, in support of a proposition with which I had no sympathy. But I was captivated because it was a perfect piece of art. Many other arguments had been made in the same case, each of them of from two to six hours in length. Mr. Knox spoke less than an hour, and yet said everything that could be said on his side. Not a word was wasted. Not a single digression weakened the force of his irresistible logic. Not a decision was read from. He assumed that the great judges before whom he spoke knew something of the law and the decisions themselves. You see the same thing in its highest form in Marshall's decisions. I once advised a class of law students to commit to memory half a dozen of Marshall's greatest opinions. After years of reflection, I think I shall stand by that advice.

In making an argument before a court or jury, remember that the most important thing is the statement of your case. *A case properly stated is a case nearly won.* Beware of digression. It calls attention from your main idea. It is a fault, too, which is well-nigh universal. I earnestly advise every young lawyer, as a practice in accurate thought, to demonstrate a theorem of geometry every morning. There is no such remorseless logic as that of logarithms. It will produce a habit of definiteness, directness, and concentration invaluable to you. The young gallants of a century ago used to practice fencing for an hour each morning. Why should not you do the same thing in intellectual fencing—you, the devotee of the noblest swordsmanship known to man, the swordsmanship of the law?

Do not waste too much time quoting cases to a court. It produces contempt rather than conviction on the part of the judge, who himself is a daily maker of decisions and knows their value. He knows the stifling mass of precedents —and sighs under them. It is rare that more than two cases should be cited in oral argument on any given point. Those cases ought to be the most controlling you can find—not necessarily the latest. They should be cases decided upon reason rather than upon authority. Your true judge likes to reason the thing out. Do not, however, go into a court without having thoroughly reviewed and mastered all the precedents bearing on every phase of your proposition. It requires desperate labor to do this and will shorten your life; but such is the hard fate of the profession you choose and such is the condition of our absurd system of multiplying reports.

Do not be what is known as a "case lawyer"—an attorney who does not know the law as a science, but merely looks up precedents and texts concerning a particular case. You may prevail in your case, but you will not be a *lawyer*. Stick close to the elemental Blackstone—you can never get along without your Blackstone. Do not read a condensed edition of that great commentator. It is like reading an expurgated Shakespeare. I understand that one of the justices of the supreme court still reads Blackstone once each year. This may be a fable, but I hope it is not. You cannot do a better thing. Thirty minutes each day will give you Blackstone from cover to cover in less than a year, with many holidays. Very few modern text-books are of permanent value. Pomeroy's "Equity Jurisprudence" is an exception. You ought to read that almost as closely as you do Blackstone. Of course I cannot give here a list of those few books which should be your daily food. Any really educated lawyer will mention them to you. The great mass of text-books are nothing more than digests.

As to Law Books

Let your reading in the law be confined almost exclusively to the general principles of the common law. Reading statutes is unprofitable. You should never answer a question or proceed in a case on the presumption that you remember the statute. The rule of Sir Edwin Coke ought to be your rule. "I should," said Coke, "feel that I ought to be put out of my profession if I could not answer a question in the common law without referring to the books. I should feel that I ought to be put out of my profession if I would answer a question in the statute law without referring to the statute."

Do not confine yourself to law books. A man who does so is like the farmer who persists in planting the same soil with the same crop; exhaustion, barrenness, and unprofitableness are the results in each case. Read generously, widely. It is impossible for a man to be a great lawyer, so far as the learning of his profession is concerned, who has not saturated himself with the Bible. He may be a great practitioner, but not a great lawyer. It is the source of nearly all our law. There is no more curious and fascinating study than a comparison of the ordinances of the Hebrews with what we think our modern statutes.

Read deeply in science. Read widely the great novelists. They are scientists of human nature, and you are dealing with human nature in your profession. Read profoundly in history. If you were to study every decision on constitutional questions made by every court in this country, you could not understand the Constitution. You must go back to the roots of it. Trace out the growth of our institutions in Holland. Work out the modifications by these upon institutions adopted from England. Trace the indigenous development of both of these from the old Crown charters, and finally up to our Constitution itself.

Then take Bancroft's "History of the United States"; then that greatest monument of intellectual achievement of

the nineteenth century in the realm of history, Von Holst's "Constitutional History of the United States." Books like Douglass Campbell's remarkable production, Fisher's novel and yet convincing essay, and other like serious and original works, too numerous to criticise here, are indispensable. Nothing is more disgusting to an informed court than to hear a surface argument on constitutional law by an advocate who thinks he has mastered that tremendous subject by studying all the decisions of the courts upon any given point.

You will say this is a heavy task I am assigning you. It is indeed. But have you not chosen the profession of the law? And if so, do you dare to be less than a lawyer? How dare you not shoulder your glorious burden with patience, fortitude, and determination. Do not be as if you were to enlist as a soldier and end as a camp follower.

I am told that the king of the American bar has a standing order with his booksellers to send him every new book of approved merit in all the departments of literature. The result is that when he comes before the court his mind is fresh and sparkling with clear and original ideas poured into his brain from every mountain peak of inspiration in all the world of human thought. He brings to the service of his client not only a study of his case and a knowledge of the grand science of the law, but the vivifying, vitalizing power of all the world's great minds in all the realm of intellect.

If you say you have no time for all of this, the answer is that, if that is true, you have no time to be a great lawyer. You have the time if you will use it. A little less lingering at the club, an economy of hours here and there—this will give you time and to spare. Of course if you would rather "loaf" than be great, if you hunger rather after the fleshpots than the lawyer's wreaths, this advice is not for you.

Do not use intoxicants. Even beware of coffee; it is one of the most powerful nerve and brain stimulants. The coffee habit is as easily formed and as remorseless as the alcohol habit. After a while, if excessively used, it produces its sure result. Your faculties have been sharpened by this intellectual emery wheel until the edge begins to crumble.

There are lawyers in every town who, day by day and year by year, find that they have to work harder to understand a case or master a precedent than they did before. Whereas they formerly could get the point of a precedent by reading it over once, they must now read it over four or five times. You usually find them the victims of coffee.

Do not work late at night. It is a fictitious clearness of mind that comes to the midnight toiler. This also grows into a habit. Conform to nature. Go to bed early. Get up early and do your fine and original work in the morning. It will be hard for you to form the habit, but after you have done it you will be amazed at the comparatively immense nervous power you possess in the morning hours.

Keep to the Point

In trying a case before a jury, never be trivial. Do not bandy gibes, no matter how witty you may know yourself to be in repartee. The jury and even the court may laugh, but they are not impressed, and you have not helped your case; and you are there to win your case. As in your argument, so in your examination of witnesses, *keep to the point.* In arguing a case, no matter what its nature, before a court or jury, never rage or rave. *Get to the point.* Speak with great earnestness, but not with violence or volume of sound. Remember that even the most terrible emotions of the human heart in their most intense expressions are comparatively quiet. Be earnest. Be sincere. Be the master of your case, and the result must be satisfactory.

It sometimes becomes necessary for an attorney to assert his rights and privileges to the judge himself. Do not shrink from it. It is your duty to your client, your profession, and the cause of justice. Never cringe to a court. Never cringe to any one. He will despise you for it, and properly so. Remember the dignity of your profession. Erskine, in his first case, rebuked a prejudiced and perhaps an unjust judge with such vigor that England rang with it.

Cultivate lucidity of style. You will do that at some risk

at first. When a young lawyer is extremely clear, he is apt to be regarded as not deep. Abstruseness in expression is very frequently regarded as an indication of great depth. Nevertheless persist in a clear and simple style. Make the statement of your cause and the argument in support of your propositions so lucid and plain that the judge or jury will say: "Why, of course, that is so. What is the use of the young man stating that?"

The study of Abraham Lincoln's speeches will be very helpful. Two or three of Roscoe Conkling's arguments after he left the Senate are models of perspicuity. Blackstone is one of the clearest writers who ever illuminated the great science to which you and I are devoted. Perhaps the greatest logician who ever lived was the Apostle Paul; read him as a master of logical utterance. Never be ponderous; never be florid. At the same time, never be dry. Be clear; be pointed; be luminous. I remember having heard both sides of a case argued before an eminent federal judge. One of the lawyers made a long, turgid, "profound," and musty argument; proceeding like a draft horse from milepost to milepost, until the alert mind of the judge was almost frantic with impatience. The lawyer on the other side is one of the most eminent members of our profession. He is as lithe as a panther, physically and mentally, sharp as a serpent's tooth, as lucid as the atmosphere on a cloudless day, and yet as suggestive as a hickory wood fire in the old home fireplace on a wintry night. He paced the floor in impatience, while Mr. Turgidity blew the dust in clouds from precedent after precedent.

When it came his time to reply, he did so with a clearness and wealth of expression, an appropriateness of illustration, and a simplicity of reasoning that made one feel that the other man had committed an impertinence in presenting his side at all. Of course he won his case.

Respect Yourself

Respect yourself. A man may lose his money, his reputation—may even lose everything—and yet he has not lost everything if he retains his self-respect. Be a gentleman at the outset of your career and forever. Do not move among men like a beggar for favors. Do not wear poor clothes. Apparel yourself like a gentleman. No client worth having respects you for advertising your poverty. Do not fear that your community will not know that you are poor. They know it and sympathize with you. But every one of our race likes to see a man "game." Therefore dress well. Bear yourself like a man who has prosperous potentialities if not prosperous assets. Keep your office in as perfect condition as yourself. Remember that it is your workshop. Put all your extra money into books. There is no adornment of an office equal to a library, just as there is no adornment to a mechanic's shop equal to his tools. You know what you think of a doctor when you find his office equipped with the latest appliances. Do not permit your office to be a loafing place, even for your fellow-lawyers. You cannot afford to cultivate professional courtesy at the expense of the discipline of your office.

Be very careful of the places you frequent. Remember that Pericles was never seen except upon the street leading to the place of council. Depend upon yourself; do not call into council another attorney. This is a point on which most lawyers will disagree with me. Nevertheless if you are not competent to handle your case, you have done wrong to open an independent office. If you call another attorney into council, every probability is that you will suggest all the solutions yourself and in reality win the case; but your old and distinguished associate will get all the credit. See well to your evidence before you go into the trial of a cause. Be very cautious on cross-examination. It is the most powerful but most dangerous weapon known to the trial of a cause. Do not bluster, "bulldoze," or browbeat a wit-

ness. There is nothing in it. You simply make the jury sympathize with the person abused. Remember that an American loves nothing so much as fair play. He regards you and the witness as adversaries: you the stronger and with immense advantage.

Ask few questions on cross-examination. Employ the Socratic method always. Ask only those questions the logical conclusion of which is irresistible, and stop there. Don't press the conclusion on the witness. It is your province to show that in your argument. A timid, confused witness, whom you know to be telling the truth, may often be confused by cross-examination and made to make a false statement; but this you have no right, as an honorable attorney, to make him do. A just judge ought to stop you if you try it.

Think what a tremendous intellectual effort the properly conducted lawsuit is. You must know your case; you must know your evidence; you must know each witness as a person and each item of his testimony; you must know the law applicable to your general proposition and the general law upon its various ramifications; you must study the witnesses of the other side; and, almost more important than any of these, you must study that wonderful combination of intellect, prejudice, and passion called the jury.

THOROUGHLY UNDERSTAND YOUR JURY

When the time comes for you to address that jury you must thoroughly understand each man. This is not that you may influence him, or "play upon" him, or resort to any of the devices of the baser sort. It is that you may know how best to get the truth of your case to him. How to get your thought, your theory, your cause before each juror should be your only concern. Never try to be "eloquent." Never be funny. It is unwarrantable even to arouse a jury's sympathies. *Forget everything except making the juror understand your case.* The result will be that he will understand your case, and if he understands it and it is

a case you ought to win, his understanding of it means that you will win it.

Take at least one excellent legal periodical. There are four or five legal magazines published in America, each of which is very good indeed. Do not pay any attention to the digests of cases with which some of these periodicals burden their pages. You cannot remember them and it will only confuse you. But you will find in each number one very serious and profitable article, and possibly more, on matters of vital interest to the profession.

The methods of scientific scholarship are now invading the law, and many of these legal essays are superb pieces of work. Now and then you will find an essay of monumental worth. Such is the remarkable introduction to Stephen's admirable work on pleading. The author's demonstration of the value of forms and his comparison of the Roman civil law with the English common law is the most carefully thought out and learned piece of legal writing I can think of at this moment. It is as great as it is brief.

Take part in politics. I know that it is an ordinary saying that a lawyer should leave politics alone. It is not true. What right have you, a member of the great profession which, more than all other forces combined, has established and defended liberty, to withdraw yourself from active participation in the sacred function of self-government? You have no such right.

Of course you should not make politics your profession. That is fatal to your success in the profession of the law. It is one profession or the other—one love or the other. But take part in your party's primaries. Make yourself so wise and useful that you will be an indispensable party counselor. By all means be a "factor" in your party.

As you value life itself, do not permit yourself ever to be made a lobbyist under the guise of general employment by a corporation or any other interest concerned in legislation. It is no doubt proper for a lawyer to make a legal argument before a legislative committee in behalf of clients. Nevertheless I advise you not to do it. It is the first step

toward the disreputable form of lobbying. There is, of course, perfectly proper and even necessary lobbying. But then you are a lawyer, are you not?

We all know instances of brilliant lawyers and powerful men who have thus sold their birthrights for miserable messes of pottage. No matter how much you need money, never accept a retainer or fee of any kind from a corporation or person, or any interest, which really does not want your active service, but in that manner is purchasing your silence. Accept no employment except real, genuine employment for actual, tangible, and honest work. Money secured from any other kind of employment is a loss to you in every way, even financially.

Think daily of the nobility and dignity of your profession. Remember the great men that have adorned it and established the pillars of its glory. They were gentlemen, men of learning, men of breeding, men of honor as delicate as a woman's blush. Be you such or leave the profession. Keep in mind the lords of the bar. Resolve each morning when you awake that, to the utmost of your efforts, you will strive to be like them.

Finally, preserve your health. Work, work, work. Cling to the loftiest ideals of your profession which your mind can conceive. Do these; keep up your nerve; never despair, and success is certain, distinction probable, and greatness possible, according to your natural abilities.

THE PROFESSIONAL MAN

A Lawyer's Advice

By STEWART LYNDON WOODFORD

[Stewart L. Woodford, lawyer and diplomat, was born at New York City, September 3, 1835. He took his collegiate course at Columbia, graduating in 1854, and three years later began the practice of law in his native city. In 1860 he served as messenger in the Republican presidential Electoral College, and during 1861-2 was assistant United States District Attorney of the Southern District of New York. From 1862 to 1865 he served in the Union army, becoming brevet brigadier general of volunteers. At the close of the war he entered the arena of politics, and New York state elected him lieutenant governor for the period of 1865-68. He was defeated in his candidacy for governor of New York in 1870 by John T. Hoffman. In 1872 he was again a member of the Electoral College, this time presiding over the assembly. From 1873 to 1875 he was a member of Congress, and from 1877 to 1883 United States Attorney of the Southern District of New York. He was a member of the commission to draft the charter for Greater New York in 1896, and in 1897 he was appointed United States Minister to Spain, which was terminated in the following year by the outbreak of hostilities between the two countries over the affairs of Cuba.]

AGE and experience owe certain and clear obligations to youth, and an old lawyer should be able to say something to those proposing to study law that may help them.

First. I advise that no young man enter the profession who does not feel himself deliberately and persistently moved and constrained thereto. The bar is crowded with men who have no special adaptation or calling to the profession. They are in each other's way, and they are a hindrance and, generally, a detriment to their clients.

Second. If a young man thinks he is called to the bar, let him examine himself very carefully and be sure that this

impression is based on real fitness and sound judgment, and not on fancy and whim.

Third. When one has decided that he must be a lawyer in order to fulfill his own life and answer his own ambitions, then let him become a lawyer, even if he has to sweep an office and live on crusts in order to get into the profession.

The man who has not the patience, the persistence, the self-denial, and the pluck to suffer in order to win his desire and accomplish his purpose, has not the metal or the quality to really be a lawyer and win its highest honors and best rewards.

Fourth. If you feel that you must be a lawyer in order to be truly and in the best sense yourself, then get a collegiate education if you can, but do not abandon your purpose because you have not the means to go through college. Abraham Lincoln did not go to college. He could not. Charles O'Conor, who led our New York bar for years, did not go to college. He graduated from the errand boy's place in a law office.

I have in my thoughts, now, one who took very high rank in our profession, who was a merchant's clerk by the command of his father until he was twenty-one, and then when he was free to follow his own will left the counter and compelled success at the bar. Collegiate education is a most desirable preparation, and if one possibly can he should secure it. But it is not a necessity, and he who is really fit to be a lawyer will win his way to his profession and to his place in that profession despite all obstacles and against all difficulties. If you have not that resolute will, then leave the law alone.

Fifth. Go to a law school if you can. This is far more important than the academic college. But if you really mean to be a lawyer, do not abandon your purpose because you cannot afford the law school.

Sixth. Get into a well-ordered, hard-working law office, and, when there, make yourself useful. Do not be afraid of work. You will find dawdlers, idlers, and incompetents everywhere. If, to use a current phrase of the shop and

the street, "you mean business," those with whom you are will very quickly know your disposition and appreciate your work.

Seventh. After you are admitted to the bar get your own office and put up your own shingle as soon as you can. Independent practice cultivates self-reliance and makes your clients your own. Of course this is to be determined by each man's good sense as applied to his own special case.

If you have a good place offered you in an established firm where you can have varied practice, it may be wise to accept it and use its opportunities. If you need money for your support, you will, of course, do that which will assure your living. But, all other things being equal, I still think it best for a young lawyer to get the advantage of independent and self-reliant practice.

Eighth. Having studied, keep steadily at work. You will never again have such good opportunity for reading and work. When you get a case, learn everything that is reasonably to be learned about that case, and study each case and try each case, not for the fee, but for the law that is in it.

Ninth. Be honest with your clients, honest with opposing counsel, and honest with the court. A trick may seem to win for a day, but it is a bad investment for a lifetime. A man comes to be known by his associates at the bar and by the bench far sooner than he realizes. And that knowledge is generally unerring.

The lawyer states a fact and his opponent and the court alike know that it is so simply because he says it. Another makes a statement and he is believed after his statement has been proved. Nowhere does character, simply as character, count for so much as in the practice of our profession.

Tenth. Be businesslike, methodical, and prompt in the transaction of business. If possible, bring the exactitude of the bankingroom into the habits of the law office. If you collect money, deduct your fee and pay over the balance promptly. Keep your appointments to the minute. Time is a business man's money, and the better the business man

the more will he appreciate your promptness. Lawyers are proverbially careless as to time appointments. Help to cure that unfortunate tendency.

Eleventh. When you have undertaken a case, whether it be large or small, whether the fee is large or small, do your very best. Never, under any circumstances, allow yourself to do careless work.

Twelfth. Above all, remember that ours is a profession and not a trade, and that while fees are good and necessary, the highest and best purpose of our calling is to secure justice, to right wrongs, and to fulfill sacred trusts. Capital will come to you to know how its investments may be made legally and safely. Quarrels and differences will be brought to you for adjustment, if adjustment be possible, and for decision by the courts if adjustment be impracticable. Dying men will leave their interests and their loved ones to your advice and to your care. Character will place its security in your keeping. The highest, the deepest, the holiest interests of the family and the state will be committed to you.

Your profession is almost sacred. May you acquit yourselves like men.

THE PROFESSIONAL MAN

Journalism

By CHARLES ANDERSON DANA

[Charles A. Dana, journalist and editor, was born at Hinsdale, N. H., August 8, 1819. His boyhood was spent at Buffalo, where he worked in a store. He entered Harvard in 1839, but difficulty with his eyes compelled him to leave after two years. In 1842 he joined the Brook Farm Community at Roxbury, Mass., and remained associated with it until its dissolution, when he entered upon newspaper work in Boston. In 1847 he joined the staff of the "New York Tribune," and in 1848 went to Europe to report the doings of that revolutionary year for the "Tribune" and several other Eastern papers. When he returned, he became the "Tribune's" managing editor and so continued until his disagreement in 1862 with the editor, Horace Greeley, whose hostile criticism of Lincoln caused him to resign.

He was thereupon appointed assistant secretary of war and spent most of the remaining war time at the headquarters of the great armies to supply accurate information to the seat of government. In 1865 he went to Chicago to take charge of a new paper, "The Republican," but a year later came East and organized a stock company to buy "The Sun." The first number under his editorship was issued in January 1868, and "The Sun's" success and influence during the thirty years of his management placed it in the front rank of American newspapers. He was a man of varied interests, being a collector of books and pictures, and interested in the growing of rare plants and trees. In early life he translated two volumes of stories from the German, "The Black Ant" and "Annie and the Elves." Later he planned and edited with George Ripley the "New American Cyclopedia." He also edited the "Household Book of Poetry," and, with Rossiter Johnson, "Fifty Perfect Poems" in 1883. He delivered many notable addresses, some of which have been published. His "Reminiscences of the Civil War" and "Eastern Journeys" have appeared since his death, which occurred at his home near Glen Cove, L. I., October 17, 1897.]

THE profession of journalism is comparatively new. It really is, as it exists to-day, an affair of the last forty or fifty years. When I began to practice it in a weekly

paper the apparatus which we have now was quite unknown. The sheets which we daily take in our hands and from which we gather a view of the whole world and of all that has been going on in it, all the sciences, all the ideas, all the achievements, all the new lights that influence the destiny of mankind: all that was entirely out of the question. There was no such apparatus, and it has been created by the necessities of the public and by the genius of a few men who have invented, step by step, the machinery and the methods that are indispensable, and without which we could not undertake to do what we do.

Of course, the most essential part of this great mechanism is not the mechanism itself; it is the intelligence, the brains, and the sense of truth and honor that reside in the men who conduct it and make it a vehicle of usefulness—or it may be of mischief: because what is useful can just as easily be turned to mischief if the engineer who stands behind and lets on the steam is of an erroneous disposition.

The number of intellectual young men who are looking at this new profession, which for the want of a better name we call the profession of journalism, is very great. I suppose that I receive myself every day, taking one day with another, half a dozen letters from men, many of them college graduates, asking for employment, and for an opportunity of showing what is in them. Of course they cannot all get it in the same paper. Now and then one obtains a place, but generally the rule that is observed in all well-organized newspaper offices is that the boys who begin at the beginning are taken up step by step in accordance with their faculties and their merits. This is so because, as we know in college, it is impossible that there should be any imposture which sets a man's abilities above their real value, since in the daily intercourse and the daily competition of study and of recitation the real worth of a man's brain is demonstrated, so that there is never any doubt. So it is in a newspaper office. The boys who begin at the bottom come out at the top. At the same time these boys do not all start out with the best outfit, that is to say, with the best education: and

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I have known very distinguished authorities who doubted whether high education was of any great use to a journalist. Horace Greeley told me several times that the real newspaper man was the boy who had slept on newspapers and ate ink. Although I served him for years and we were very near in our personal relations, I think he always had a little grudge against me because I came up through a college.

We know that among a certain number of students there are so many doctors, so many clergymen, so many lawyers —sometimes too many lawyers; and there are also, of course, a considerable number who are looking forward to this great civilizing engine of the press; and it is a great engine.

Just consider the clergyman. He preaches two or three times in a week, and he has for his congregation two hundred, three hundred, five hundred, and if he is a great popular orator in a great city, he may have a thousand hearers; but the newspaper man is the stronger because throughout all the avenues of newspaper communication, how many does he preach to? A million, half a million, two hundred thousand people; and his preaching is not on Sundays only, but it is every day. He reiterates, he says it over and over, and finally the thing gets fixed in men's minds from the mere habit of saying it and hearing it; and, without criticising, without inquiring whether it is really so, the newspaper dictum gets established and is taken for gospel; and perhaps it is not gospel at all.

In regard to this profession there are two stages, and we will consider each of them separately. The first is the stage of preparation. What sort of preparation, what sort of preliminary education should a man have who means to devote himself to this business? There are some colleges which have lately introduced schools of journalism or departments of journalism, where they propose to teach the art of newspaper making, to instruct the student in the methods that he should employ, and to fit him out so that he can go to a newspaper office and make a newspaper.

Well, I will not say that is not useful. I do not know

that there is in any intellectual study, or in any intellectual pursuit, or in any intellectual occupation that is followed with zeal and attention, anything that can be described as useless. No, I do not know of anything, if you really learn it, although it may seem to your next neighbor around the corner rather trivial, that is not useful after all. There is certainly a great utility and a profound science in baseball, and the man who pursues it and acquires it has acquired something that will be useful to him. He has got a knowledge, he has got an intellectual discipline that will be valuable all his life through. So it is with every study that a man may pursue, so that we cannot say that anything is useless. But as for these departments of journalism in the colleges: there has been one at Cornell University for several years, for six or eight years I should say, and I have never found that a student or graduate who had pursued that department there instead of pursuing other studies, was of any great avail as a practical worker in the newspaper work that he had been trying to learn.

In fact it seems to me, if I may be allowed a little criticism, that the colleges generally are rather branching out too much, until they are inclined to take the whole universe into their curriculum, and to teach things which do not exactly belong there. Give the young man a first-class course of general education; and if I could have my way, every young man who is going to be a newspaper man, and who is not absolutely rebellious against it, should learn Greek and Latin after the good old fashion. I had rather take a young fellow who knows the Ajax of Sophocles, and who has read Tacitus, and can scan every ode of Horace, I would rather take him to report a prize fight or a spelling match, for instance, than to take one who has never had those advantages. I believe in the colleges; I believe in high education; but I do not believe in scattering your fire before you are in the face of the enemy.

When you begin to practice the profession of a newspaper man, then is the best time to begin to learn it; but while you are in college with the daily series of professors and all

the appliances of study that belong to the college, make the best of them and pursue vigorously those studies that give accuracy in learning, and that give fidelity and accuracy in recitation. The great end of education, President Walker used to say, is to be able to tell what you know; and he used to say, too, that some bright men carried it so far that they were able to tell a great deal they did not know.

There is no question that accuracy, the faculty of seeing a thing as it is, of knowing, for instance, that it is two and one-quarter and not two and three-eighths, and saying so, that is one of the first and most precious ends of a good education. Next to that, I would put the ability to know how and where most promptly to look for what you don't know, and what you want to know. Thirdly, I would put Dr. Walker's great object, being able to tell what you know, and to tell it accurately, precisely, without exaggeration, without prejudice, the fact just as it is, whether it be a report of a baseball game, or of a sermon, or of a lecture on electricity, whatever it may be, to get the thing exactly as it is. The man who can do that, is a very well educated man.

In addition come the qualities of personal talent and genius. Now, genius is a great factor. When we think of such a genius as the one I have just mentioned, the late Mr. Greeley, why, our minds may well be filled with admiration. I do not suppose more than one or two gentlemen here ever knew Mr. Greeley personally; but he was a man of immense ability, of instincts of extraordinary correctness in many respects, and of the power of expression, of telling what he knew, in a delightfully picturesque, humorous way which not merely instructed the hearer and reader, but gave him a sense of delight and satisfaction from the mere art that was applied in the telling. He had had no great advantages of education. He had to pick up his education as he went along, reading in the winter evenings by the firelight, and never wasting a chance of learning something. But he lacked one of the most precious faculties, which it is another great object of the college education to cultivate and bring out, and that is what we will call the critical faculty,

the judgment which, when a proposition is stated to you or a fact is reported, looks at it calmly and says, "That is true," or else, "That is false"; the judgment, the instinct, the developed and cultivated instinct which knows the truth when it is presented and detects error when it comes masquerading before you, without the necessity of any long examination to ascertain whether it is truth or error.

The first thing that the man who is looking forward to this profession in which the use of the English language is the main thing, since it is the instrument that he must apply continually for the expression of ideas and for the dissemination of knowledge, is to know this language thoroughly, and that is the very corner stone of the education that a journalist should look forward to and should labor after and should neglect no opportunity of improving himself in.

After a knowledge of the English language comes, of course, in regular order, the practice, the cultivation of the ability to use it, the development of that art which in its latest form we call style, and which distinguishes one writer from another. This style is something of such evanescent, intangible nature that it is difficult to tell in what it consists. I suppose it is in the combination of imagination and humor, with the entire command of the word-resources of the language, all applied together in the construction of sentences. I suppose that is what makes style. It is a very precious gift, but it is not a gift that can always be acquired by practice or by study.

It may be added that certainly in its highest perfection it can never be acquired by practice. I do not believe, for instance, that everybody who should endeavor to acquire such a style as the late Dr. Channing possessed, could succeed in doing so. He was a famous writer fifty years ago in Boston, and his style is of the most beautiful and remarkable character. As a specimen of it, let me suggest to you his essay on Napoleon Bonaparte. That was perhaps the very best of the critical analysis of Napoleon that succeeded to the period of Napoleon worship, which had run all over the world. Channing's style was sweet, pure, and delight-

ful, without having those surprises, those extraordinary felicities that mark the styles of some writers. It was perfectly simple, translucent throughout, without effort, never leaving you in any doubt as to the idea; and you closed the book with the feeling that you had fallen in with the most sympathetic mind, whose instructions you might sometimes accept or sometimes reject, but whom you could not regard without entire respect and admiration.

Another example of a very beautiful and admirable style which is well worth study, is that of Nathaniel Hawthorne. In his writings we are charmed with the new sense and meaning that he seems to give to familiar words. It is like reading a new language to take a chapter of Hawthorne; yet it is perfectly lovely, because with all its suggestiveness it is perfectly clear; and when you have done with it you wish you could do it yourself.

The next thing that I would dwell upon would be the knowledge of politics, and especially of American politics. This is a very hard subject. Its history is difficult. If you go back to the foundation of the republic, you find it was extremely complicated even then; and it requires very careful study and a very elevated impartiality to make your analysis at all satisfactory to yourself as you go through the work.

Still, it is indispensable to a man who means to fill an important place in journalism, and all who begin upon it certainly have that intention. No young man goes into any profession without a good degree of ambition; no young man can carry his ambition very far in journalism—I mean, in general, universal journalism, not in special—no man can carry his ambition very far who does not know politics, and in order to know politics there must be in the man some natural disposition for politics. I have often been appealed to by friends, who said: "Can't you take this young man and give him employment?" Then I will watch that young man for a month or so and see what it is that he takes up in the morning. If he takes up the newspaper and turns to the political part of the paper, and is interested in that, why that

is a good symptom of his intellectual tendencies; but if, instead of that, he takes up a magazine and sits down to read a love story, why you cannot make a newspaper man out of him.

And yet he may make a very good writer of love stories; and as that is a sort of merchandise which seems to be always in demand, and to bring pretty fair prices, why, if you have a talent in that direction, go ahead. You may make a good living, I have no doubt; but you will not play any momentous part upon the stage of public affairs, and that is the sphere of activity which the generous-hearted and courageous youth looks forward to.

In order to be of importance in the affairs of this world in the newspaper profession, you must be a politician, and you must know not merely the theories and doctrines of parties, not merely the recondite part of politics, but you must know practical politics, the history, the men, the individuals, their ideas, their purposes, and their deeds; know them if you can as they really are, not as the blind and the prejudiced may imagine them to be.

Now, Mr. Greeley is my great exemplar in journalism. He thought a newspaper man was of little use who did not know just the number of votes in every township in the state of New York, and in every voting precinct, and who could not tell whether the returns from the second district of Pound Ridge, in Westchester county, were correctly reported or not without sending to the place to find out how many votes had really been cast. That was one of his great points of distinction and success; but I would not advise you to labor after that sort of knowledge unless you have inherited a natural talent for it. But you should understand and appreciate the theory of the American government, you should know where this republic began, where it came from, and where it belongs in the history of mankind, and what part it is destined to play in the vast drama of human existence. That is the sort of politics that must appeal to any intelligent man and that will surely test his utmost powers. And while we are on this point, we may say in passing that

an American who thinks another country is better than this should not go into journalism. You must be for the Stars and Stripes every time, or the people of this country won't be for you, and you won't sell enough papers to pay your expenses.

In order to understand the theory of the American government, the most serious, calm, persistent study should be given to the Constitution of the United States. I don't mean learning it by heart, committing it to memory. What you want is to understand it, to know the principles at the bottom of it; to feel the impulse of it; to feel the heartbeat that thrills through the whole American people. That is the vitality that is worth knowing; that is the sort of politics that excels all the mysteries of ward elections, and lifts you up into a view where you can see the clear skies, the unknown expanse of the future. Besides the Constitution of the United States, it is well to be acquainted with the constitutions of all the states. All these constitutions are more or less modeled upon the central constitution; but there are differences, and those differences a man ought to know. The citizen of New York ought to understand the Constitution of New York and for himself get at the reason for this and that provision. Take, for instance, the great question which has occupied the people of New York so long, the question of an elective judiciary or of a judiciary appointed by the governor; which is better, which is right? That is better and that is right, evidently, which gives better judges and which produces a more equable, steady, consistent, and just administration of law. Well, now, the young man who sets to work and studies out that question has accomplished a great deal; he has got a light in his mind that will go with him a great way, and that will help out his judgment in other things. Supposing that he is conducting a newspaper, and is responsible to the people for conducting it in an instructive and useful manner, and for having it such that when he says a thing is so the people will know that it is so: the man who knows the constitution of the states, of his own state, and of all the principal states, as well as the

Constitution of the United States, is well fitted for conducting a newspaper, or even for administering a government.

The modern newspaper, however, is not confined to any neighborhood or to any country. You have got to look beyond your own land; you have got to study the history of every European country. You must know, first of all, the history of England. We came from England; the American constitution is rooted in English principles and in English history. You want to know where it started from. You want to go into the garden where the seed was first sown and watch the growth of this great product of wisdom and beneficence which we call the American constitution. You see, the course of preparatory study is pretty large; and it is not very easy; it must be carried on in earnest. It is not a matter of fancy or of play. And so not merely with the history of England, but with the history of all of Europe, of every great and every little country. The course of human history offers a safe guide for human action, and especially for political action. The history of France is a chapter that is worthy of the utmost attention that can be given to it. Why have such and such results been produced? What is there from which this and that effect has proceeded? These are the sort of questions that careful study can bring an answer to; and without careful study you will never get the answer.

But I do not propose all these things as a course of preparatory study for a young man. You cannot learn everything in a day. It is as much as many men can do to learn a few things in the lapse of a long life; but at least try to learn something solid, to add to your stock of efficacious knowledge, to add to your understanding of principles, and to feel that as little effort as possible has been wasted and as little time as possible flung away.

The next point to be attended to is this: What books ought you to read? There are some books that are indispensable, a few books. Almost all books have their use, even the silly ones, and an omnivorous reader, if he reads intelligently, need never feel that his time is wasted even

when he bestows it on the flimsiest trash that is printed; but there are some books that are absolutely indispensable to the kind of education that we are contemplating, and to the profession that we are considering; and of all these the most indispensable, the most useful, the one whose knowledge is most effective, is the Bible. There is no book from which more valuable lessons can be learned. I am considering it now not as a religious book, but as a manual of utility, of professional preparation, and professional use for a journalist. There is perhaps no book whose style is more suggestive and more instructive, from which you learn more directly that sublime simplicity which never exaggerates, which recounts the greatest event with solemnity, of course, but without sentimentality or affectation, none which you open with such confidence and lay down with such reverence: there is no book like the Bible. When you get into a controversy and want exactly the right answer, when you are looking for an expression, what is there that closes a dispute like a verse from the Bible? What is it that sets up the right principle for you, which pleads for a policy, for a cause, so much as the right passage of Holy Scripture?

Then, everybody who is going to practice the newspaper profession ought to know Shakespeare. He is the chief master of English speech. He is the head of English literature. Considered as a writer, considered as a poet, considered as a philosopher, I do not know another who can be named with him. He is not merely a constructor of plays that are powerful and impressive when they are shown upon the stage, with all the auxiliaries of lights, and scenery, and characters; he is a high literary treasure, a mighty storehouse of wisdom, the great glory of the literature of our language; and, if you don't know him, knowing the language may not be of much avail after all. Perhaps that is an exaggeration, and I take it back; but it is an object to know Shakespeare; it is indispensable to a journalist.

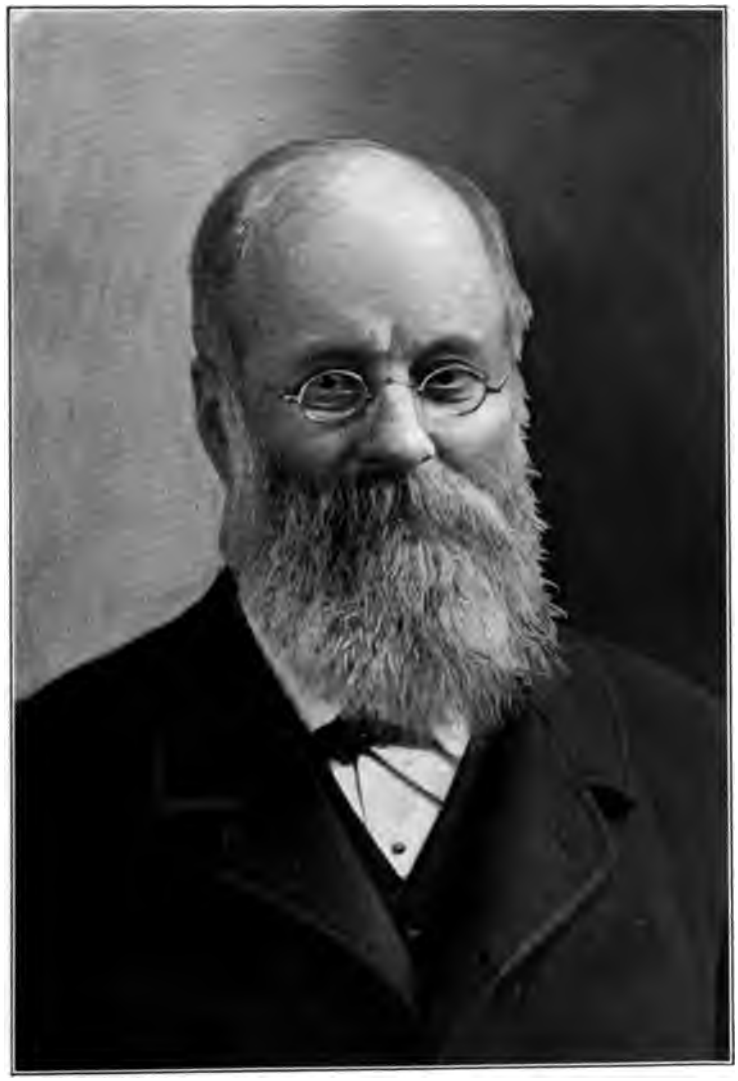
Then there is another English author who ought not to be neglected by any young man who means to succeed in this profession. I mean John Milton, and I invite your

attention to that immortal essay of his, too little known in our day, the "Speech for the Liberty of Unlicensed Printing." It is a treasury of the highest wisdom, of the noblest sentiments, and of the greatest instruction; study that, and you will get at once the philosophy of English liberty and the highest doctrine that has ever been promulgated, to my knowledge, with regard to the freedom of the press.

When I advise you to make yourselves familiar with these glories of English literature, I do not say that these writers ought to be taken as models. Do not take any model. Every man has his own natural style, and the thing to do is to develop it into simplicity and clearness. Do not, for instance, labor after such a style as Matthew Arnold's—one of the most beautiful styles that has ever been seen in any literature. It is no use to try to get another man's style, or to imitate the wit or the mannerisms of another writer. The late Mr. Carlyle, for example, did, in my judgment, a considerable mischief in his day because he led everybody to write after the style of his "French Revolution," and it became pretty tedious. They got over it after a time, however. But it was not a good thing. Let every man write in his own style, taking care only not to be led into any affectation, but to be perfectly clear, perfectly simple.

That is all that it seems to me necessary to say with regard to the studies and the education of the journalist. Now let us turn to the practice of this profession. One of the parts of the newspaper profession which employs the greatest number of men, and I may also say the greatest amount of talent, is the business of reporting. In a large newspaper office, as in the "Tribune" in New York, for example, where there may be one hundred men who are attached to the paper as writers, as correspondents, as reporters, and to the strictly editorial department, out of this one hundred, sixty or seventy will be reporters, that is, men who are sent out when any event of interest occurs, when a bank breaks, when a great fire takes place, when there is an earthquake, to inquire into the facts and collect information,

and to put that information into form so that it can be printed the next day. That is one of the most important branches of the profession, and it is paid very liberally, I am glad to say. For instance, I know many reporters who earn $10 or $15 a day and some who earn more. They have constant employment, and their labor is entirely agreeable to themselves. That is one of the first things, when a young man comes for employment and you take him on and give him a chance, that he is set to do. There, you see, all this culture that we have been considering is at once brought into action. He must learn accurately the facts, and he must state them exactly as they are; and if he can state them with a little degree of life, a little approach to eloquence, or a little humor in his style, why, his report will be perfect. It must be accurate; it must be free from affectation; it must be well set forth, so that there shall not be any doubt as to any part or detail of it; and then if it is enlivened with imagination, or with feeling, or with humor, why, you have got a literary product that no one need be ashamed of. Thus we see this department of the newspaper is really a high art, and it may be carried to an extraordinary degree of perfection. At the same time, the cultivated man is not in every case the best reporter. One of the best I ever knew was a man who could not spell four words correctly to save his life, and his verb did not always agree with the subject in person and number; but he always got the fact so exactly, and he saw the picturesque, the interesting, and important aspect of it so vividly, that it was worth another man's while, who possessed the knowledge of grammar and spelling, to go over the report and write it out. Now, that was a man who had genius; he had a talent the most indubitable, and he got handsomely paid in spite of his lack of grammar, because after his work had been done over by a scholar it was really beautiful. But any man who is sincere and earnest, and not always thinking about himself, can learn to be a good reporter. He can learn to ascertain the truth; he can acquire the habit of seeing. When he looks at a fire, what is the most important thing about that fire? Here, let us



CHARLES A. DANA.

say, are five houses burning; which is the greatest? whose store is that which is burning? and who has met with the greatest loss? Has any individual perished in the conflagration? Are there any very interesting circumstances about the fire? How did it occur? Was it like Chicago, where a cow kicked over a spirit lamp and burned up the city? All these things the reporter has to judge about. He is the eye of the paper, and he is there to see which is the vital fact in the story, and to produce it, tell it, write it out.

Next to the reporter, a very important functionary in the newspaper is the man who reads the other newspapers and makes extracts from them. Mr. Greeley used to think that it was enough to make a good paper if he had an able man to read the exchanges, provided he himself was there to add up the returns of the elections. The man who reads the exchanges is a very important man; and, let me say, too, he is a pretty highly paid man. He has to read, we will say, three thousand papers regularly. All the newspapers in the country come into the office, and he does not do anything else. He sits at his desk all day, and a pile of newspapers, or say a cord of newspapers, is laid before him every morning: he starts to work and turns them over and over to see what is in them. He has to know what it is that should be taken from them and put into his paper. What is the interesting story? It requires judgment to know this; it requires knowledge and experience as well as talent. It also requires a sense of humor, because there are a great many things that are really important that may not seem so at the first glance, and the newspaper reader has got to judge about that. He must always be on hand and spend a great many hours at his desk; and he is pretty tired when he gets through with his day's task. It is a hard duty, but he has lots of amusement, and, as I said, he is very well paid. So he is happy.

Next to the exchange reader in the newspaper organization comes the man whose duty it is to receive manuscripts and examine them and prepare them for the press, to edit them, correct them; where the writer has made a slip of

rhetoric, to put the right word in or the right turn of the phrase; to clarify it all; to make the sentences clean. That is a hard job in the writing of a great many persons. They interject; they put sub-sentences in parentheses. They do not begin and say the thing in its exact order, taking first the man and then what he did, and where he went; but they mix it up and complicate it. The editor who examines the manuscripts has got to go through all these things and straighten them out and disentangle the facts that the writer has twisted up; and then he must correct the punctuation, mark the paragraphs—where one idea is finished and a new idea begins. He also receives the correspondence. Letters from all over the world go into his hands. You will get a letter from Madagascar perhaps. Ought it to be published? There is a lot of news in it, perhaps, that is of no interest in New York or in Schenectady. He has got to determine whether it is worth while to put that in or to leave it out, although you may have to pay for it and not use it. Masses of matter are paid for in a large newspaper office that are never used. So, you see, he is a very important functionary, and it requires a great deal of knowledge, a great deal of judgment, a great deal of literary cultivation to be able to fill that position.

Then finally you come to the editor-in-chief, and he is always a man who gets into his place by a natural process of selection. He comes there because he can do the work, and I have known some young men who had no idea that they would ever have control of a newspaper, who have risen to that place, and who have filled it with wisdom and success and force. Yet at the bottom of it all, it is always a question of character, as well as of talent. A fellow that is practicing arts of deception may last a little while, but he cannot last long. The man who stays is the man who has the staying power; and the staying power is not merely intellectual; it is moral. It is in the character, and people believe in him, because they are sure he does not mean to say anything that is not so.

Now, every one who has written or talked about news-

papers has made a great account of the matter of news, and in these remarks that it has been my opportunity to make, I have not said anything yet on that subject. News is undoubtedly a great thing in a newspaper. A newspaper without news is no newspaper. The main function of a newspaper is to give the news, and tell you what has happened in the world, what events have occurred of all sorts, political, scientific, and nonsensical. By the way, one person that I have not mentioned is the scientific man. That is also a place that has to be filled by special cultivation. A scientific man, one who knows electricity and chemistry; one who can really understand the inventions of Edison, and who can tell what is going on in the scientific world where so many men of genius are incessantly at work bringing out and developing new things. There must be a man of that sort on a newspaper. That is a department of news of supreme consequence.

But the business of collecting news, which has always been regarded as of prime importance, is rather declining into a second place. It is a necessity, and it is very costly, to collect and to bring here to Schenectady, for instance, for printing to-morrow morning, the news of the whole world, from England, from Germany, from Russia, from France, from Africa, from South America, from the Pacific, so that it may be presented to the reader who takes up the paper to-morrow, and he may have a panorama of all the events of the preceding day. What a wonder, what a marvel it is that here for one or two cents you buy a history of the entire globe of the day before! It is something that is miraculous, really, when you consider it. All brought here to Schenectady and printed! All brought here by electricity, by means of the telegraph! So that the man who has knowledge enough to read can tell what was done in France yesterday, or in Turkey, or in Persia. That is a wonderful thing. But the very necessity of bringing all this matter together, and the immense expense attendant upon it, have led to the formation of associations among newspapers and to the organization of agencies. I won't undertake to say

now how much the expense is, because I do not remember it with absolute certainty, but it is an enormous sum, say perhaps $3,000 to $5,000 dollars a day; but when it is divided among the four or five or six thousand newspapers in the United States, first divided among all the great cities and then among the cities of the second class, which pay less, and so on until finally it is distributed all around, why, it costs each individual newspaper very little; and the system which is most perfectly organized is the establishment in Chicago and New York known as the United Press. It supplies the news of the whole world, so that the individual editor sitting at his desk has only to look after the news of his own locality. When he has got that, he gets from the United Press the news of all the rest of the world, and, putting them together, his report of the day's history of the globe is complete. That is an institution which has revolutionized and is revolutionizing the operations of the profession, so that instead of the struggle to hunt after the news, to appreciate the importance of events that people generally do not see, and to report them so that you may have in your journal something that the others have not got, that struggle is mainly obviated by this organization of the United Press. The news of the entire world is brought to you, and the editor, the newspaper, is put back into the position which the thinker occupied before this supreme attention to news was regarded as indispensable. The editors and writers of the newspapers are now emancipated from all that drudgery, and have become intellectual beings again. The work of newsgetting is performed by this great and wide-reaching agency of the United Press, and the individual editor here in Schenectady, or in Chicago, or New Orleans has no anxiety on that subject any longer. He devotes himself to the intellectual part of his business, and is able to carry that on to a greater degree of perfection than he has ever been able to do it with before. That, I think, is a revolution that is going to make a great change in the profession of newspaper making, raising it to a higher dignity than it has ever occupied. I look forward to the effects of this revolu-

tion with the greatest hope and confidence, and I think you young gentlemen who have not yet embarked in the profession may be congratulated on being able to come into it under such auspicious circumstances.

Electrical Engineering

By FRANCIS B. CROCKER

[Francis B. Crocker, professor of electrical engineering in Columbia University, was born in New York City, July 4, 1861. He took his degree of M.E. from Columbia in 1882 and the degree of Ph.D. in 1895. From the time of his graduation in 1882 until his election to the Columbia professorship his energies were devoted to inventions and to electrical engineering, and since 1888 he has been vice-president of the Crocker-Wheeler Electric Co. He has occupied commanding positions in various organizations connected with his profession, being president from 1892 to 1895 of the New York Electrical Society, also president for 1897–98 of the American Institute of Electrical Engineers. In 1893 he was elected permanent secretary of the International Electrical Congress which met at Chicago. His books in the field of electricity are "Practical Management of Dynamos and Motors," published in 1894, and "Electric Lighting," published in 1899.]

IN considering the opportunities for young men in the electrical profession, it is almost impossible to get uniform opinions. There is a tendency either to underestimate or to overestimate.

The remarkable results that have already been obtained and the very rapid advance of electrical science and its applications have naturally made a great impression upon the public mind, and many young men have been attracted to the business, or have been advised by their friends to take it up. The consequence is that a large number of persons have entered the field without any special preparation or talent for it, their only reason being its attractiveness and the notion that it is easier to make money in this line of work than in any other. This has been carried so far that some prominent engineers, as well as teachers of electrical engi-

neering, have stated that the profession is already overcrowded, and on that account they often advise young men not to enter it.

In my opinion, no such condition really exists. An appearance of overcrowding is undoubtedly produced by the presence of men who have been drawn into the pursuit by mere whim or the desire to make money with the least work. Such men naturally fail, and their failure produces a misleading effect as to the true conditions in the profession. Men well prepared, or possessing talent for electrical work, have gone ahead very rapidly. This is proved by the fact that the principal officers and engineers of the large as well as the small electrical companies are all young men who have advanced to their present responsible positions in a comparatively few years. I have personally followed the careers of several hundred men who have entered the field, and am convinced that in most instances they have gone ahead more rapidly than would have been possible in any other line of human effort. Where the men possessed exceptional ability, their advance has been very much more rapid than that likely to occur in any other pursuit.

There are probably two reasons for this. In the first place, the business is so new and has expanded so enormously that opportunities for promotion have been created almost more rapidly than they could be filled. Thus many men have actually been forced ahead by circumstances. The other reason is the fact that electricity is a peculiar subject. In its pursuit general intelligence or knowledge is not sufficient for pronounced success. A man possessing special taste for it soon differentiates himself from the others working alongside who may not be endowed with the same advantages. Such a man will forge ahead of his fellows at a rate that is absolutely impossible in any other calling in the world.

HAVE YOU THE GIFT?

The successful electrical engineer has more than mere ability. He is gifted with special talent, like the successful

artist or the musician. Electricity is to my mind the only mechanical pursuit that has "soul." The successful electrician is born. Many of the qualities that are his are intangible, just as the fine musician's qualities are.

But there must also be tangible qualities, certain fixed mental traits. He must have great mental alertness; the ability to think quickly, to grasp a given situation at once. He must be of an analytical turn of mind—that is, able to reason from cause to effect, or *vice versa*. In electricity one thing follows from another with absolute certainty. For example, it is possible to calculate within a fraction of a per cent before an electrical machine is built exactly what it will do. This is impossible in any other branch of mechanics. The idea, so common, that electricity is vague and not capable of being definitely controlled arises from the fact that we do not know "what electricity is." But, in point of fact, we know as much of the ultimate nature of electricity as we do of gravitation or heat. Up to the present time none of the fundamental facts of Nature are known. For example, the physicist or chemist does not know the real nature of matter. In this respect, electricity is not ahead of or behind other branches of human knowledge. In fact, it may be said that we are nearer to an understanding of what electricity is than we are to an understanding of what gravitation is, because the electrician has mental pictures and conceptions of what might be called the mechanism by which electricity is transmitted, but there are no such pictures or conceptions regarding gravitation. Gravitation is the most familiar of natural phenomena, yet we have no conception whatever of what it actually is. Little progress has been made in regard to it since the time of Newton; but electrical knowledge has advanced and is now advancing with great strides. There is every reason to believe that we shall "know what electricity is," and be able to explain the inherent mechanism by which electrical actions take place, long before we understand how and why a stone is drawn to the earth.

We know, already, what are the laws of both electricity

and gravitation, as well as the results that they produce, and it is very doubtful if our ability to control, measure, and utilize these agencies would be improved even if we understood their exact nature. The laws and applications of hydraulics would be just as definite and successful even though the facts were not known that water is composed of two atoms of hydrogen and one of oxygen. It is possible that methods of generating electricity may be advanced when its real character is discovered, but it is not likely that this knowledge will greatly affect the methods of handling and using it.

But in the popular mind the absence of this ultimate knowledge has left the impression that electricity is not only something unknown, but unknowable. Its subtlety, extreme rapidity of action, and astonishing achievements make it appear most mysterious and occult in comparison with the ordinary forms of energy. The experience of the electrical engineer is supposed to consist of a series of surprises and shocks to his mind as well as to his body. This notion is not confined to the ignorant, but is possessed by many educated persons, including non-electrical engineers. This idea has sometimes been the cause of actual harm to the progress of electrical engineering. The profession has been considered to be hardly legitimate, those who practiced it being regarded as either wizards or charlatans, or a combination of the two.

A Scientific Art-Industry

Yet, as I have said, there is hardly another science or profession where the conditions are so exact as in electricity. Known results are figured out with a degree of accuracy that is truly amazing. Many of these results are so unique and astonishing that we still regard them with wonder even after we have become familiar with them. Some of the most striking of these examples are the locating of faults on submarine cables, telephoning a thousand miles or more, transmitting power over one hundred miles, sending simul-

taneously a number of messages on the same wire, utilizing the power of Niagara, producing the Röntgen ray, and telegraphing without wires. These and hundreds of other wonderful feats are not accomplished by chance or by groping in the dark.

And, great as these feats are, new and almost equally startling results are coming up almost every week. It is the first duty of an electrical worker to fall in with rapid advances and radical departures. Therefore, a necessary qualification for the successful electrician is an interest in things that are new *because they are new.* Any one with a strong conservative tendency would be at a disadvantage in the electrical field. This is probably the reason why Americans have got along faster than any other nation in the development and use of electricity. An American prefers a thing that is new, whereas a foreigner considers newness in itself an objection. The man who is interested in ancient literature, or in archæology, cares little for electricity. This is a fact I have observed among my own friends.

Those who have gone into electricity with the idea of saving themselves labor have made a great mistake, because electricity requires fully as much application and intensity of purpose as any other line of work. Mr. Edison was once asked to advise a young man how to succeed in electricity, and his characteristic reply was, "Don't watch the clock." What he meant was that a timeserver, a man who simply works so many hours a day for so much in the way of compensation, would never rise high in the electrical business. Electricity requires that high order of interest which is the devotion to art for art's sake. Edison considers that his own success is due to the fact that he tried harder and worked more hours a day than his rivals.

In regard to physical qualifications, it is, of course, an advantage to have a strong body, but so long as one is sufficiently well to be able to keep at his work, the mere possession of physical strength is rather less of an advantage in electrical pursuits than in almost any other. This is due to the fact that it is essentially intellectual; it exemplifies

the control of mind over matter. One can control thousands of horse power by an electrical push button. This is true in no other branch of industry. Even the control of a steam engine by the working of a valve requires a certain strength.

TECHNICAL TRAINING INDISPENSABLE

Given the inborn qualities I have mentioned, the next question is in regard to the best preparation, or training, to be followed. Ten or fifteen years ago there were no schools giving a course of study in electricity except of a very elementary character. Therefore, all those who entered the profession at that time were obliged to pick up their knowledge as they went along. At the present time, however, there are many first-class institutions all over the world teaching electrical engineering very thoroughly and giving it a prominent place in their curriculum. The large companies, such as the General Electric and Westinghouse, and many of the smaller ones, in most cases require, and in all cases prefer, that a young man entering their employ should be a graduate of some electrical course of study. This in itself is a very significant fact. There are, however, exceptions made, and if a young man desires to secure a business position in electricity, in contradistinction from a technical one, the scientific training is much less important and, in fact, may be omitted. It is also true that the business positions pay as well, perhaps better, than the technical ones. By business positions I mean managerial and clerical positions in the main offices and branches of the companies. In this category are included the executive and administrative offices of the company, such as president, secretary, and treasurer, who are usually business men who have not had much, if any, technical training.

It is a question, of course, whether these men would not have been benefited if they had received a technical training also. In the engineering departments of the various companies, and in all positions involving the design, construc-

tion, installation, and operation of electrical machinery, it would seem that a scientific and techincal knowledge is practically essential. There are, of course, many prominent examples of self-made electrical men; in fact, as was pointed out, all the older electricians must necessarily have been self-taught. If we look around on the younger men, however, we find that with few exceptions those now coming to the front are graduates of technical schools. The case is similar to that existing in the relation of West Point to the army. Almost without exception the great generals have been West Point men, but there are a few Funstons and Mileses. The bulk of the army officers have been, and are, West Point men, however, and on them we depend.

Of course, success is a somewhat relative term, and it is rather hard to say what proportion of men succeed, as success may be measured in various ways. But it is probably fair to say that nearly all electricians make a good living within a year or two after they graduate. It is probably a fact that at least half of the men make what can be called a substantial success within three or four years after graduation. I have in mind several young men who have reached prominent positions, and won a national reputation in their profession, within five years after graduation from Columbia University. One of them is chief electrical engineer of the Niagara plant, the largest in the world. Another is professor of electrical engineering in a prominent university. Another became chief engineer of a well-known manufacturing company in less than two years after graduation.

The Rewards of Skill

But though these men and many others have done exceedingly creditable work and now fill responsible positions, it is a fact that the pay is not as large in the technical branches as it is in the administrative departments. This is true, however, in all other human pursuits. The technical men in a railway, for example, receive much smaller salaries than the executive officers. The same is true in chemical

industries, and in many other lines. There is no more responsible position, or one requiring more knowledge or skill, than that of captain of a transatlantic liner, and yet his pay is comparatively small. The presidents of the steamship companies, with nothing like such direct responsibility, receive salaries ten or twenty times greater than those of the captains of the vessels. By the technical man, $5,000 a year would be considered a very good and $10,000 an exceptionally large salary.

There is one thing to be considered, however. In the logical development of the new business scheme that is controlling all our great corporations, technical knowledge is beginning to be more and more to the advantage of the men who seek the great positions in these corporations. As the years go by the demand will certainly become steadily greater for a class of men who combine executive ability with a thorough technical understanding of the work they are called on to supervise. Already we have a number of striking examples of technical men who have won great business positions. Two that I now recall are Mr. Charles M. Schwab, the president of the great billion-dollar Steel Trust, who is reputed to be the greatest practical ironworker in this country, and Mr. H. H. Vreeland, the president of the Metropolitan Traction Company of New York, who was a practical railroad man long before he became the business head of what is the greatest street railway corporation in the world. Business is being conducted on definite and scientific principles to-day, and as these principles are extended more generally, the man with technical knowledge will have a correspondingly greater advantage over the man who has commercial or executive talent only.

The fact that so many men have succeeded in life without college training is often brought up as an argument to show that college education is not only unnecessary but is almost detrimental to success. The answer to such statements is that the brilliant examples of a few men who have succeeded in this way, men like Mr. Carnegie and Mr. Schwab and Mr. Vreeland, are no criterion for the ordinary

man to follow. These men are geniuses and cannot be covered by any rule. Napoleon was a graduate of a military school, but he would undoubtedly have been a Napoleon if he had received no such training, and most of his marshals were men who had no special military education. They were picked from the common soldiery because they were remarkable men.

But for the ordinarily, or even exceptionally, good man, a training in a technical school is particularly necessary in a subject so peculiar as electricity. It may be that in ordinary mechanical industries a general knowledge picked up in the shop is sufficient, but the scientific nature of electricity, and its subtleness, put it on a different plane. A general education, such as is obtained in a collegiate course, without special reference to science or its application, is usually considered to be a desirable thing, but since it does not apply to a man's professional or business career, its effect is so indirect that it often appears to be lost time. Many successful men so regard it, but it remains to be seen in the future whether in the long run the best educated and the best trained man will not come out ahead in competition with those who have had fewer advantages. As time goes on, I believe that superior training will count more than it has done in the past when conditions were more crude.

The Future of Electricity

The large number of startling and valuable inventions that have been made in electricity during the last twenty years have brought many men to the front and they have been handsomely rewarded for their labors. Even during the present year several important inventions have been brought out, and undoubtedly this will continue. But though great progress will be made, it is a fact that many of the fundamental ideas have already been evolved.

However, the application of electricity will undoubtedly extend even more rapidly in the future than it has in the past. In electrical railways there will be constructed not

only the present trolley cars for local passenger service, but high-speed railways for long distances between great cities. There is practically no limit to the speed of an electric locomotive, since its armature may rotate at a thousand or more revolutions a minute. With steam, on the other hand, it has not been found practicable to run a locomotive much more than about three hundred and fifty revolutions a minute, and, since we are practically limited in the size of the driving wheel, we can evidently expect no great increase in speed with the present steam service. An electric railroad between Berlin and Hamburg is now being designed and constructed on which it is hoped that the trains will run at a speed of a hundred and fifty miles an hour. Of course at such high speed there is considerable danger of the train leaving the track, but some positive means to avoid this danger will undoubtedly be provided.

The transmission and distribution of electrical power to motors in mines, factories, and mills is another field which is now being, and will be, rapidly extended. In fact it looks as if practically all mining, metallurgical, chemical, and manufacturing establishments will be operated by electricity in the near future. The advantages apply to mines of all kinds, iron works, machine shops, cotton, woolen, and other textile mills, chemical works, printing establishments, and almost every industry in which power-driven machinery is used. The opportunities for the inventor here are, therefore, enormous.

The electro-chemical branches are also very promising. At the present time a large portion of the copper product of the world is refined electrically, and practically all the aluminum, which is now used very extensively in the arts, is produced by electrical processes. There are also large establishments for the manufacture of soda, carbide of calcium, phosphorus, chlorate of potash, graphite, and other materials by means of electricity. There are growing up around Niagara Falls a great many works of this kind which already consume nearly 50,000 horse power, and which will be increased when more power is provided.

Few people outside of the profession realize the amazing progress that has been made in this field of electro-chemistry. And yet we are only at the beginning. The inventive genius is producing new processes almost every day that are revolutionizing results. Some of the experiments under way are almost fantastic though they are being pursued by serious-minded men. There is one concern, for example, at Niagara that is about to produce nitric acid out of the air. The air is passed through an electric apparatus, and its component parts, nitrogen and oxygen, which exist as a mere mechanical mixture, are caused to combine chemically. The gases thus produced are absorbed to form a very pure grade of nitric acid at a low price. So far the process has not been established commercially, but there is said to be every prospect of success in the near future. Then we shall have the spectacle of producing, out of the atmosphere, one of the most valuable products in the world, for which there is an unlimited demand for fertilizing purposes. Beside such a process, a gold mine would be a cheap and unimportant affair.

Hardly a day passes that some new electrical invention is not put out. These inventions vary in importance, some being small devices which are used incidentally in the various arts, and others being radically new departures which revolutionize some industry, in which case their value may run up to $1,000,000 or more.

The possibility of generating electricity directly from coal has occupied the attention of many of the greatest inventors of the world, including Mr. Edison, but up to the present time little or no progress has been made. We are still depending upon the boiler, steam engine, and dynamo for nearly all our electrical current except in those favored places where nature provides water power, as, for example, at Niagara and in Switzerland. But most parts of the civilized world do not possess sufficient water power for their need. This is particularly true in England, where the water power is very insignificant. But even with water power the advantage is not great, as it costs nearly as much

to deliver a current in Buffalo from Niagara as it does to produce it on the spot with a steam engine. What the whole electrical world is looking for is some direct process, or apparatus, in which coal may be introduced, and from which the electrical current will be generated directly. In other words, something like an electrical battery in which coal is used in the place of zinc. The person who solves this problem on a commercial basis will win greater fame than any inventor has ever known, and his reward in dollars should make him a Crœsus if he has business talent.

At the present time, with the steam engine and boiler, the best results do not give more than about fifteen per cent of the energy contained in the coal, and ordinary plants operate at an efficiency of ten per cent or less. The great advantage in converting the energy of the coal into electricity, instead of using the power in the ordinary mechanical form, is the fact that we can do so many more things—in fact, everything—with electricity. We can produce light, heat, power, chemical effects, and all from the same source of energy. For example, the trolley car is lighted, heated, and propelled from the same source, and the power that produces all these results is brought to it while it is running at a high rate of speed. With steam this would be impossible. Even gas, with which we might produce these three effects, would have to be carried on the car, which would be a clumsy and dangerous arrangement.

Electricity, therefore, is the most desirable form of power we have and, so far as we can now see, that we shall ever have. To those who are concerned with its generation and application there is assured an ever-widening field.

Municipal Politics

By NATHANIEL CLINTON SEARS

[Nathaniel Clinton Sears was born in Gallipolis, Ohio, August 23, 1854. Later the family moved to Illinois. After a year spent at Knox College he went to Amherst, where he was graduated in 1875. He then studied two years in the universities of Germany, and was admitted to the bar in Chicago in 1878. He was elected judge of the superior court in 1893, and appointed justice of the appellate court of Illinois in 1897. On April 1, 1902, he resigned from the bench to enter the law firm of Sears, Meagher and Whitney. In 1897 he was Republican candidate for mayor of Chicago, but was defeated. For the past four years he has been professor in Northwestern University Law School.]

IT is safe to say that every young man of our country feels at some time an inclination to take an active part in politics. It must be so with the young man of sound and healthy moral nature, whether from motive of using a gift which belongs to him or from motive of doing a duty which rests upon him. The fact that large numbers of men of affairs in our great cities are seemingly careless of both right and duty is doubtless due, to an extent, to failure of success in the line of political usefulness. It is not unlikely that, if the young men who try to enter political life could meet with a larger success—not in securing advantage of office merely, but in making their efforts tell in results—the extent of political indifference would be greatly lessened. The fact that so many young men do fail in an attempt to make themselves felt in political affairs must, to a considerable extent, be charged to a lack of practical knowledge of the methods which obtain in municipal politics. Here, as else-

where, effort misapplied is of no avail, however good the motive.

The young man, upon entering into political work, or attempting to do so, finds a few men in each political party seemingly guiding, if not controlling, its movements, and he finds it difficult to learn the secret of their success and power. It is often accepted as belief by the general public that these few men have entire control of the movements of the party organization, and that they alone and with autocratic power dictate party nominations and party measures. From this belief there has grown up a considerable degree of popular disfavor. The party leaders are termed "bosses" and the party organization which they are supposed to thus control is called "the machine." By looking into the methods of these party leaders it may be seen in just what their power consists and its extent. The secret of their success does not lie in any personal hold which they have upon the following which makes up the party. It is neither through power of oratory nor through personal good fellowship that the end is accomplished.

Mastering Details

The success of the party leader is founded upon hard, continuous, and systematic work in maintaining thorough precinct organization—that is to say, organization of the party workers and following in the smallest of the political subdivisions of the territory of the city. As in money matters, the adage, "Take care of the pence and the pounds will take care of themselves," holds, so in political matters the same truth may be paraphrased into "Take care of the precincts and the city will take care of itself."

Party organization has for its ends the nomination of candidates for public office and the success at the polls of the ticket made up of such candidates. For nominating purposes the smallest division of territory, wherein is the beginning of political action, is the primary district. The beginning of party organization is the precinct club; the

next larger body is the ward club; and the final organized body is the central city committee. The precinct club is made up of all party adherents who choose to join it within this smallest subdivision of territory, viz., the precinct. Here the effective work of the party must be accomplished, whether it be in choosing delegates to represent the ward in the city nominating convention, or in the later work of polling the full party vote at the election.

The ability to hold together, in the precinct club, in continuous party service, a number of party workers sufficient to control the selection of delegates to nominating conventions, is the chief element in the political leadership of to-day in our large cities. The strength of party leadership is built upon this power of choosing delegates.

It follows, then, to inquire how these men are able to gain and retain this power. It is frequently charged that the common method of accomplishing this end in large cities is by "ballot-box stuffing"—that is to say, fraudulent voting at the primaries. Doubtless there has been much of truth in the charge as applied to some periods and some cities. It is not, however, generally true to-day. In cities where the primary election, viz., the voting for delegates to nominating conventions, has been put into the control of state officers, and where the proceedings of such primaries have been thus hedged about with all the caution attending a federal election, the leadership of the same party leaders has continued unchanged. Apparently the delegates whom they desire are selected just as they were when the primaries were conducted under looser methods and without state supervision.

How Leaders Hold the Reins

In attempting to analyze the basis of this power it is necessary to consider the classes of party adherents who vote at the primaries. A large proportion of the business men of the city are indifferent to the primary election, and rarely take part even to the extent of voting. The total number voting at the ordinary primary election is very small in com-

parison to the number of party adherents who vote at the election, and compared to the number of such who might vote at the election it is even more insignificant.

It is safe to divide those who do take part in these primaries into two classes: first, those who work through motive of public spirit, and, secondly, those who work through motive of office-seeking. The first class includes the citizen who, with manly appreciation of his right and duty, avails himself of his citizenship. It also includes many who, without much sentiment of duty, find a pleasure in partisanship and loyalty to the doctrines of their particular party. This class of voters is held together in party work without any particular effort on the part of the organization leaders. The hold of the party leaders upon them is always slight, and their support is gained, if at all, because they believe that the leadership is efficient in perfecting and maintaining a strong party.

The second class comprises those who hold offices, elective or appointive, and wish to retain them, and those who are ambitious to secure such offices. It also includes the many who through kinship or friendship are interested in the success of such officeholders or seekers. It is in keeping this class active in support of the party organization and in directing their action that the task of the party leader is found. Wherever the merit system of appointment to the minor offices, known as the civil service system, is not adopted, and wherever it is adopted and nullified, the distribution of appointive offices among party workers is a controlling factor in party organization and party leadership. This method of reward, known as the "spoils system," is inevitable wherever the civil service system is not in force.

Where the distribution of offices as a reward for party service obtains, the party leaders are commonly supposed to exercise an absolute power in determining the manner of distribution. To an extent this is true, and to a very large extent it is untrue. It is true that the party leaders have much to do in determining the method of distribution, but that they arbitrarily decide who shall receive nominations

and appointive offices is not true. It could not be so for any length of time without operating to undo the leadership. The number of disappointed usually exceeds the number of satisfied among office-seekers. If the disappointments could be charged to the party leader alone, the end of his leadership would be quick to follow.

How the Spoils System Works

The only plan of party organization which has proved of any permanent efficiency in the political history of large cities, is one by which the choice of candidates for elective offices and recipients of appointive offices is fairly left to the body of the party workers.

A ward club indorses by resolution some one from among its number, and agrees to work for his nomination for a specified office. In this manner candidates for nomination are indorsed by ward clubs in various parts of the city and for the various offices to be filled at the election. At the primaries delegates are chosen to support these various candidacies. After the delegates are elected a caucus is held, usually several, before the meeting of the nominating convention. The delegates chosen in a ward select some one of their number to go into a caucus composed of representatives of other ward delegations, and together representing the wards of a certain district or part of the city. These representatives of several wards confer and agree upon a candidate for nomination to be supported by them. If there are several candidates from the wards represented, and but one can be given a place upon the ticket, the conflicting interests must be reconciled. Some must yield. All must finally agree upon the support of one. Then a representative from this caucus is chosen to go to another caucus, made up of similar representatives of other districts or parts of the city. In this final caucus perhaps a half-dozen or a dozen men, each representing the candidate of a district, and each in reality representing the body of party workers in such district, try to reach an agreement for their constituents

by which a satisfactory ticket is made up, one which will receive the support of all these various constituencies in the convention. Here again some must yield, but in the final selection of the entire ticket the claims of each locality or district are usually given fair recognition. In this manner a few men, meeting together and seemingly acting with arbitrary power, but really representing constituencies who are anxiously awaiting the results of their respective efforts and advocacies, shape the selection of a ticket. The men thus chosen to take this final action are chosen again and again as long as the body of the party workers are satisfied with their representation, and they thus become leaders in party organization.

THE WARD CLUB CIVIL SERVICE

In the distribution of appointive offices the party workers in the city have a more direct voice. The elected officials, where there is no civil service system, usually distribute the minor appointive offices throughout the city, according to territory and party representation. This distribution is not usually made on the basis of personal friendship. Neither is it made at the dictation of the party leaders. It is made, as a rule, upon the recommendation and indorsement of the ward clubs. If, upon the basis of territory and party representation, a certain number of appointments are to be given to a certain ward, the appointees are those members of the party, in that ward, whom the ward club selects as entitled thereto by reason of party service, provided the ones thus recommended are deemed fit by the appointing official in capacity and in character.

The strength of the system lies in the fact that the disappointed seekers for office can charge their failure to no one save their fellow-workers, and they are encouraged to remain in active party service because their success in the future depends not upon the will of any one or any number of leaders in the party, but upon the will of their own fellows. In the strength of this system lies the secret of party leadership in large cities.

Upon this system, it is safe to assert, has been grounded all successful and permanent leadership. The plan is certainly not to be commended by thoughtful men in comparison with an honestly conducted civil service. But it does commend itself to the average party worker as being more democratic in principle and preferable to any plan of distribution based upon the mere caprice of party leaders. In any event, in the absence of an efficient civil service system, the public good is wholly dependent upon the firmness of the elective official in refusing to appoint any member of his party, however great his party service, whose fitness and character are not clear.

The Roots of Political Strength

The young man entering into political work to-day in any large city is confronted with these or similar conditions. That these conditions might be vastly improved by adopting a system of choosing candidates by direct vote, rather than by delegates, is beyond question. But they exist as the conditions of to-day and must be recognized and understood by one seeking to do effective political work. How, then, can the young man entering political action make his influence and labors of account? Certainly not by mere platform oratory. Field work cannot be done on the rostrum. The young man who seeks to make himself felt in municipal politics must begin at the beginning, viz., in the ward precinct and at the primary elections. Here are the roots of political strength, and here he must make the foundation of his work. Where comparatively so few work, the force of one is largely felt. A few young men of good purpose, working together, not seeking office but the public good, can accomplish wonders in any primary district of any city. A few in each district, working faithfully and persistently, can do much toward making the results of good delegates, good candidates, honest and efficient officials, and the ultimate adoption and enforcement of a pure civil service assured facts.

THE PROFESSIONAL MAN

The College Man in Business

By ANDREW CARNEGIE*

BUSINESS is a large word, and in its primary meaning covers the whole range of man's efforts. It is the business of the preacher to preach, of the physician to practice, of the poet to write, the business of the university professor to teach, and the business of the college student, one might sometimes think, from the amount of attention bestowed upon it, to play football. I do not speak of "business" in this wide sense, but as specifically as defined in the "Century Dictionary":—

"Mercantile and manufacturing pursuits collectively; employment requiring knowledge of accounts and financial methods; the occupation of conducting trade; or monetary transactions of any kind."

The illustration which follows is significant, and clearly defines this view of business. It reads:—

"It seldom happens that men of a *studious turn* acquire any degree of reputation for their knowledge of *business.*"

But we must go one step further, more strictly to define business, as I am to consider it. Is a railway president receiving a salary, or the president of a bank, or a salaried officer of any kind, in business? Strictly speaking, he is not, for a man, to be in business, must be at least part owner of the enterprise which he manages and to which he gives his attention, and chiefly dependent for his revenues not upon

* We are indebted to Mr. Carnegie for his permission to use these passages from his address on "Wealth and Its Uses," delivered at Union College, Schenectady, N. Y

salary but upon its profits. This view rules out the entire salaried class. None of these men are now men in business, but many of them have been, and most successful therein. The business man pure and simple plunges into and tosses upon the waves of human affairs without a life-preserver in the shape of salary; he risks all.

There is no great fortune to come from salary, however high, and the business man pursues fortune. If he be wise he puts all his eggs in one basket, and then watches that basket. If he is a merchant in coffee, he attends to coffee; if a merchant in sugar, he attends to sugar and lets coffee alone, and only mixes them when he drinks his coffee with sugar in it. If he mines coal and sells it, he attends to the black diamonds; if he owns and sails ships, he attends to shipping, and he ceases to insure his own ships just as soon as he has surplus capital and can stand the loss of one without imperiling solvency; if he manufactures steel, he sticks to steel, and lets copper severely alone; if he mines iron-stone, he sticks to that, and avoids every other kind of mining, silver and gold mining especially. This is because a man can thoroughly master only one business, and only an able man can do this. I have never yet met the man who fully understood two different kinds of business; you cannot find him any sooner than you can find a man who thinks in two languages equally and does not invariably think only in one. Subdivision, specialization, is the order of the day.

SERVANT OR MASTER?

Let us begin, then, at the beginning. Is any would-be business man content in forecasting his future, to figure himself as laboring all his life for a fixed salary? Not one, I am sure. Here is the dividing line between business and non-business; the one is a master, and depends upon profits, the other a servant, and depends upon salary. Of course, we have all to begin as servants with salary, but we have not all to end there.

The young college man may have some difficulty in

obtaining a start, great difficulty as a rule, but here comes in the exceptional student. There is not much difficulty for him; he has attracted the attention of his teachers who know many men of affairs; has taken prizes; he is head of his class; has shown unusual ability, founded upon characteristics which are sure to tell in the race; he has proved himself self-respecting, has irreproachable habits, good sense, method, untiring industry, energy, and his spare hours are spent in pursuing knowledge, that being the labor in which he most delights.

One vital point more: his finances are always sound, he rigorously lives within his means, and last, but not least, he has shown that his heart is in his work. Besides all this, he has usually one strong guarantee of future industry and ambitious usefulness: he is not burdened with wealth; it is necessary that he make his own way in the world. He has no rich father, or, still more dangerous, rich mother, who can, and will, support him in idleness should he prove a failure; he has no life-preserver, and therefore must sink or swim. Before that young man leaves college he is a marked man. More than one avenue is open for him. The door opens before he is ready to knock; he is waited for by the sagacious employer. Not the written certificate of his professor, for certificates have generally to be read, and are read between the lines; but a word or two spoken to the business man who is always on the lookout for the exceptional young graduate, has secured the young man all that a young man needs—a start. The most valuable acquisition to his business which an employer can obtain is an exceptional young man; there is no bargain so fruitful for him as this.

It is, of course, much more difficult for only the average student; he has generally to search for employment, but finally he also gets a start.

MAKING OPPORTUNITIES

It is the career of the exceptional student which illustrates the pathway to success. We need not render ourselves

anxious about him; he is all right. He has been thrown into the sea, but he does not need any life-preserver; he does not need to be coddled, he will swim; he was not born to be drowned, and you see him breast the waves year after year until he is at the head of a great business. His start, of course, is not at the head, he is at the foot; fortunately so, for that is the reason his progress has always been upward. If he had started high he would not have had the chance to make a continual ascent. It does not matter much how he starts, for the qualities within him are such as to produce certain effects in any field he enters. He goes forward upon a very small salary, performing certain small uses, indeed, much smaller than he thinks himself capable of performing, since he bears a graduate's certificate; but these he performs thoroughly.

Some day in some way something happens that brings him to the notice of his immediate superior. He objects to some plan proposed, and thinks it can be bettered in some way, or he volunteers to assist in a department other than his own; or, he stays, one day, later at his work than usual, or goes some morning sooner, because there was some part of the business that had not been entirely settled the night before, or there was something to start next morning that he was afraid might not be ready or just right, and he "just goes down early to be sure." His employer has been somewhat anxious upon the same point, and he, too, goes down early that morning and finds his salaried young man, showing that he does not work for salary alone; it is not solely an affair of "hire and salary" with him; he is not that kind of a young man; he is working for the success of the business. Or it may be that some day his employer proposes a certain mode of action in regard to a customer's account; perhaps the young man has started in the office, and has been asked to look after the credits, a most important part. His employers wish to close this credit, which, perhaps, would embarrass the customer. This young man, known to the customer, has had to visit his place occasionally in the course of business, collecting his accounts, or trying to col-

lect them, and the young man modestly says he is a splendid fellow, bound to succeed, does his business upon fair and wise methods, and only needs a little temporary indulgence to come out all right.

The employer has faith in the young man's judgment and ability, thinks it a rather strong suggestion for a clerk to make, but says to him: "You look out for this matter, and see that we do not lose; but, of course, we do not wish to injure one of our customers; if we can help him without risk we wish to do it." The young man takes the matter in hand, and results prove he was quite right; the customer becomes one of the very best of all their customers, and one that it would require a great deal to take away from the firm.

Or, perhaps, the bright young man may have noted the insurance policies upon the works, and their dates of expiration; he finds the fact has been overlooked—that some of the insurances have lapsed and are invalid. It is none of his business; he is not paid to look after the insurance of the firm; in one sense—the narrow sense—that is the business of some other man; but he ventures to call attention to the fact, and suggests that the premiums should be paid. But, now mark the advantage of general eading and education. This young man has read the newspapers and reviews, and learns of several "sharp business practices" by which the insurer is sometimes defrauded of his insurance, and especially has he read of new methods and cheap plans of insurance. He suggests that it would be well to change this and that policy to another and very solid old company. The fact is, the business man of this day has to read, yes, and study, and go to the roots of many things, that he may avoid the pitfalls that surround business upon every side. He would not be an employer worth having that did not note what kind of a young man that was, although now in the humble guise of a clerk.

Be Bold

Suppose he is an electrician or engineer. In the great manufacturing concern so fortunate as to secure his services,

he has to do with some humble branch of the work, but he discovers that there are a few boilers which are not quite safe, and that the engines or motors are built upon false mechanical principles, and are very wasteful of fuel, and that one of the engines will soon give trouble; there is a foundation under it upon which he finds that the contractor has not done honest work; or dropping into the works one night just to see that all is going well, perhaps he discovers that a man trusted by the firm has fallen into bad habits, and is not fit for duty, or perhaps is not on duty, and that an accident might thus happen. He feels it to be his duty to take action here and safeguard the business from the danger of an accident. He draws the plans which show some defects in the machinery, lays it before his employers with suggestions how to cure these, made upon the latest scientific principles that he had been taught. The employer, of course, is very averse to spend money, and angry to learn that his machinery is not what it should be. But although he may be irritated for a moment he sits down and learns from that young man what a few thousand dollars now might save, and the result is that he tells the young man he wishes him to take up this subject and attend to it, and be sure to make all right.

Already that young man's fortune is almost as good as made. He could not hide his light under a bushel if he tried, though he is not likely to try. There is no affectation or false modesty about him. He knows his business, and he feels fully conscious and proud of the fact that he knows it, and he is determined that his employer should not, at least upon that point, know less than he does. He must never fail to enlighten his employer. You cannot keep such a young man as that back; and no employer wishes to keep him back. There is only one person as happy at finding this young man as the young man is in finding himself, and that is his employer. He is worth a million more or less, but of course it would not be good for him to get it while so young.

He has now made two steps upward. First, he has got

a start, and, secondly, he has satisfied his employer that he renders exceptional service, a decisive step; as the French say, "he has arrived," and he is there to stay. His foot is upon the ladder; how high he climbs is his own affair. He is among the few within the very threshold of the whole business.

There is a good deal to be done after this, however. This young man has zeal and ability, and he has shown that he has also that indispensable quality—judgment; and he has shown another indispensable quality—that his heart is in the business; that no other cause takes him from it; that he pushes aside the very seductive temptations which surround young men, and concentrates his attention, his time, his efforts, upon the performance of his duties to his employer. All other studies, occupations, and all amusements are subordinate to the business, which holds paramount sway. His salary, of course, increases. If he has happened to engage with an employer who does not fully appreciate such services as he has rendered, and is ready to render, other employers have not failed to note that here is that rare article, the exceptional young man, in the service of their rival, and it is possible that our young hero may have to change employers. It does not often happen, but it does sometimes, that a young man has to do so. As a rule, the employer is only too thankful that such a young man has come to him, and he makes it to his interest to remain. Confidence is a matter of slow growth, however, and it is a far cry from a high salary as a hireling into equality as a partner.

WEALTH'S PRIVILEGES

I can confidently recommend the business career as one in which there is abundant room for the exercise of man's highest power, and of every good quality in human nature. I believe the career of the great merchant, or banker, or captain of industry to be favorable to the development of the powers of the mind, and to the ripening of the judgment upon a wide range of general subjects; to freedom from prejudice,

and the keeping of an open mind. And I do know that permanent success is not obtainable except by fair and honorable dealing, by irreproachable habits and correct living, by the display of good sense and rare judgment in all the relations of human life, for credit and confidence fly from the business man, foolish in word and deed, or irregular in habits, or even suspected of sharp practice. There may be room for a foolish man in every profession—foolish as a child beyond the range of his specialty, and yet successful in that —but no man ever saw a foolish business man successful. If without sound, all-round judgment, he must fail.

The business career is thus a stern school of all the virtues, and there is one supreme reward which it often yields which no other career can promise; I point to noble benefactions which it renders possible. It is to business men following business careers that we chiefly owe our universities, colleges, libraries, and educational institutions, as witness Girard, Lehigh, Chicago, Harvard, Yale, and Cornell.

If, then, some business men may fall subject to the reproach of grasping, we can justly claim for them as a class what honest Thomas Cromwell claimed for the great cardinal, and say: "If they have a greed of getting, yet in bestowing they are most princely, as witness these seats of learning."

The Value of College Training

By FRANCIS LANDEY PATTON

[Francis L. Patton, educator and theologian, was born at Warwick, Bermuda, January 22, 1843. He studied at the University and Knox College, Toronto, and in 1865 graduated from the Theological Seminary at Princeton, N. J. He preached in New York City, Nyack, and Brooklyn, and in 1871 became professor of theology in the Presbyterian Theological Seminary at Chicago. During his ten years there as professor he edited from 1873–76 the "Interior" and served as pastor of the Jefferson Park Presbyterian Church. In 1881 he became Stuart professor of the relation of philosophy and science to the Christian religion in the Theological Seminary at Princeton, and in 1885 he assumed the additional duties of professor of ethics in the college. Three years later, upon the retirement of Dr. McCosh, he was unanimously called to the presidency, and his administration has been signalized by the development of the institution into a university, an enlargement of the academic and scientific departments, and a great increase in the number of students in attendance, besides a notable growth in the material equipment. He retired from the presidency in June 1902. In 1869 he published the "Inspiration of the Scriptures," and in 1874 the "Summary of Christian Doctrine."]

A BOY fifteen or sixteen years of age, let us suppose, has decided on a business career, but wishes to know whether it would be better for him to go to college first. This is a very important question and he must settle it soon, for unless he is at one of the schools which are specially intended to fit boys for college he may find that his school curriculum, however excellent in its way, is not of the kind to open to him the doors of many of our universities.

It is rather unfortunate that there are two types of secondary education in this land, one having in view "the entrance requirements" of the leading universities, and the

other intended to fit men for the activities of life in the various avenues of employment. The high school principal says very naturally that he must plan his curriculum with reference to the wants of the great mass of his pupils who, when they leave school, must earn their living, and who cannot go, or at all events do not intend to go, to the university. He must see to it, therefore, that certain studies which are not included in the college entrance requirements, but that are, as he supposes, important factors in fitting boys to be good citizens and in enabling them to earn a livelihood, are incorporated in the high school's schedule of studies. If, therefore, a boy discovers toward the close of his career at the high school that he wishes to go to college it may easily happen that he will find that he has learned the things that he ought not to have learned and left unlearned the things that he ought to have learned. It is a pity that through lack of a proper articulation of the high school and the universities so few of the high school graduates go up to the universities. This condition of things is not likely to last, and there are indications now of an approximation of the high school curriculum to the requirements for admission to our colleges and universities. This approximation would go on more rapidly, perhaps, if there were, on the one hand, a little more elasticity in the construction of entrance requirements, so that a liberal substitution of "equivalents" would be allowed, and particularly if, on the other hand, the custodians of high school education would more commonly recognize the fact that the general mental discipline which fits a boy for college is the best discipline also to qualify for the work of life.

THE POOR MAN'S SON

Were this dual system of secondary education eliminated from our problem the question then would be whether a young man about to enter upon a non-professional career would do well to go from school into an office, or whether he would be the gainer by going through the four years of a college course.

This question should not be answered without a careful consideration of both sides of it. There are some, of course, whose circumstances preclude the possibility of a college education, and the problem before us does not assume any practical form with them. Others, again, are so abundantly able to defer indefinitely the period of remunerative employment that they need not be considered in this discussion. Those to whom our question presents a serious problem are the sons of parents of limited means who are willing to make great sacrifices in order that their children may have the best advantages, but who are in doubt whether the gain to be secured by a college course is sufficient to justify these sacrifices. Let us understand, then, that in the case supposed the young man is under the necessity of earning his living, and that he has decided to earn it in one of the many forms of commercial activity covered by the word "business." We must treat this necessity and the proposed method of meeting it with proper respect. It is all very well to say that there is something in this world besides money. So there is: but it is hard to get on without a certain amount of it; and the simple ambition to "get on" is in itself a very worthy one. Few men can make fortunes; but every man has a natural desire to be independent, and any man who in these days of competition is able to maintain himself and his family in a position of modest comfort, who is able to educate his children and enable them to grow up in an atmosphere of refined living, has escaped the just imputation of failure. What, then, shall I say to a young man who has the ambition to realize social comfort and independence? Will he be more or less likely to succeed in business because he has taken the time to acquire a college education?

THE LIMITATIONS OF OFFICE EDUCATION

It is safe, I think, to say that a university career will not lessen his business prospects. It is true that he will have spent four years in college which might have been devoted

to business, and that his companion who went from school to the office has got the start of him. It is but fair also to recognize the elements of advantage which the boy who does not go to college has over the one who does. He goes to business say at seventeen years of age. He is not ashamed to do the humble duties which are assigned to him. He learns to be prompt, industrious, and obedient. He acquires, that is to say, business habits. His range of knowledge is limited, but of such resources as he has he is in full command. He writes a fair hand, spells correctly, and while his mathematical knowledge is chiefly of the kind which college professors speak of sneeringly sometimes as mere "business arithmetic," he is a master of it and performs the common operation of that arithmetic with readiness and accuracy. If now he has a knowledge of stenography and typewriting or will be at the pains to acquire it he may be in a position to earn a salary, and will perhaps be advanced to the post of private secretary to the head of his house, with a fair chance of further promotion, at a time when the college graduate is vainly looking around for something to do. In a few years he will have mastered the *technique* of his business, whatever it may be, and while business as a science, if that word may be used in regard to business, he may never know, business as an art he will have learned very thoroughly. Put him in the company of educated men and he will appear at a disadvantage, perhaps, in regard to questions in economic science. He knows nothing about "unearned increments" or the "law of diminishing returns." He is not on such easy terms with generalizations pertaining to business life as the college graduate is, but he understands the details of his own calling, whatever it may be, and he has a certain commercial value in the labor market which the college graduate will not acquire without some trouble.

Still, this knowledge of *technique* the college graduate will acquire in a much shorter time than it took the schoolboy to acquire it. He is more mature to begin with, and if he has not wasted his time in college he has the great advan-

tage of coming to his business with trained powers. He has learned to give his undivided attention to any subject that needs it, and to do this by an act of will. His powers have not been trained to work in a narrow groove and are not limited to the automatically accurate performance of a single task, but they are at his command and under his control. He has been accustomed to handle the leading concepts of science or philosophy and to reason about them. When he is addressing himself to business problems he simply has a new set of concepts to be handled in the same way. Logic is logic, whether the subject of thought be insurance or astronomy. The power which comes as the result of a liberal education will soon show itself, and some day the opportunity will arrive for the university man to reveal the advantage which he has over the man who left school to go into an office.

Business that Demands College Men

It will be strange indeed if it is not found that the college graduate is capable of doing a kind and quality of business which the man who lacks this training is unable to do. For while the ordinary duties of buying and selling may not require much education, there are, on the other hand, enterprises which involve a comprehensive knowledge of affairs, which call for careful reasoning, which tax a man's power of exact statement, which demand the use of refined forms of expression, and which presuppose a man's ability to associate on equal terms with cultivated and highly educated men. It is needless to say that a man with only an ordinary school education is at great disadvantage under these circumstances compared with the man who has made good use of his time during the four years of his undergraduate life. Besides, it must be remembered that the number of university men in business is increasing all the time. This is changing the character of the competition which one must expect to meet in business life. The university man in the Old World is usually in one of the learned professions or he belongs to the

leisured class. But in our land and in this day the business world is claiming an increasingly large proportion of our graduates. Attention was called not so long ago to the fact that the college man does not often come to the front and take a leading position in business. That is simply because until a comparatively recent day so few college men entered business life. The great fortune builders have, as a rule, not been university graduates. But this is not likely to be the case in the future. The time is rapidly approaching, if it has not already arrived, when the young man without a liberal education will find that the most coveted places in the business and the social world are to all intents and purposes closed to him on this account. In a word, the business man must go to college because the college man is going into business. More and more, therefore, is it likely to be found that for the successful prosecution of the highest forms of business pursuits a liberal education is indispensable.

Another Side of the Problem

There is, I confess, another side of this question which is suggested by the ever-increasing complexity and magnitude of commercial transactions. So large a place does commerce hold in our civilization that it may well be asked whether a knowledge of its principles and of its phenomena may not properly enough be made part of a liberal education. A man can hardly be said to be abreast of his age who lives in entire ignorance of the principles and methods of the business world. I do not wonder that men who have a large vision of the mighty changes that are going on in commerce are beginning to feel that in making generous provision for a liberal education some place should be given to the scientific treatment of the phenomena of industrialism. But I am not discussing the question whether a liberally educated man should know something of business, but whether a business man should have a liberal education. I am trying to show that he should, and the argument would be all the stronger if, in addition to the study of geology, metaphysics, the

history of art and civil engineering, an opportunity were given the undergraduate of learning, in a large and scientific way, something about the principles that underlie the great financial operations of the world.

It must be admitted, of course, that the undergraduate does not always make good use of his time in college. He is tempted to fall into idle habits, and he may come out with a diploma authenticating his liberal culture without having gained as much as he ought to have gained by his four years in college. I am in no sympathy with the disposition to look leniently upon the course of a young man who thus wastes his father's money, and who regards a college course as an indolent introduction to the more serious work of life, or a university diploma as a passport to social recognition. And yet it must be conceded that the education one gets in college is not altogether of the intellectual kind. The art of living the community life is nowhere better learned than through the comradeship of undergraduate days. There a man learns, if he ever does, how to get on with his fellows, has his manners conventionalized, is taught self-restraint, and learns the lessons of respect for others. It is there that he learns to feel his share of responsibility for public sentiment and to realize his power and influence in making it. There, too, he is apt to get his first lessons in the art of dealing with men, and this in after life is apt to be of far more value to him as a part of his business training than would be the routine and not very intellectual duties that devolve upon the junior clerks of the countinghouse.

There is still something else to be said. For after material success has been achieved, and after it has expressed itself in material things—a man's house, his furniture, his plate, his pictures, his horses, and his liveried servants—there are some things that money cannot buy, and there must be a degree of disappointment in the discovery on the part of the uneducated man that what he covets most is still denied him. There are men, of course, who transcend the defects of education. And men sometimes acquire grace of manner, refined taste, the ability to appear at ease in the society

of cultivated people, and to appreciate the best that has been said in literature, who never matriculated at a university. But it would not be wise to be governed in our decision of the subject under consideration by these exceptions.

A college education, however, must be looked at apart from its bearing upon a man's success in making money, or his capacity for enjoyment, or his eligibility for refined society. A man is superior to his environment. The life is more than meat, and the body than raiment. By so much as a man is educated is he realizing the possibilities of his selfhood. There is a profound and a very true philosophy in the advice that is sometimes given a man to make the most of himself. For this, apart from the pleasure that comes of it or the place it gives one in the world, is one's duty. Nor must it be forgotten that every man is part of a great social organism and that he owes duties to this organism. He should not be willing to be a leech and simply suck a living out of the community upon which he happens to fasten himself. If he has worthy views of life he will consider not only what he should do in order to achieve success, but how he shall use his success after he has attained it. His power for good will depend upon his influence, and that will depend largely upon his strength of character and his intellectual equipment.

My advice to any boy who may read these lines is, not to miss the chance to secure a liberal education. And let me say to any parent under whose eye this article may fall: Give your son an education, and though it be at cost of patrimony, give him a chance to earn a college diploma.

THE PROFESSIONAL MAN

The Student as Financier

By JAMES GORE KING McCLURE

[James Gore King McClure, clergyman, was born at Albany, N. Y., November 24, 1848, and graduated from Phillips Andover Academy in 1866, going from thence to Yale, where he took his degree in 1870, and pursued his theological course at Princeton, finishing in 1873. The following year he was ordained to the ministry. He held pastorates at New Scotland, N. Y., and Lake Forest, Ill. In 1897 he was made president of the Lake Forest University, but resigned in 1901 and resumed the ministry. He is the author of a "History of New Scotland, N. Y., Presbyterian Church"; "Possibilities"; "The Man Who Wanted Help"; "The Great Appeal"; "Environment"; "For Hearts that Hope."]

HAPPY the man so well educated that his finances add wings to his success. Genius, without ability to live within means actually possessed or reasonably expected, is synonymous with misery. The true blessedness of life—whatever sphere of activity a student enters—depends largely upon his ability to keep outgo less than income. Many an ordinary mind has unceasingly advanced to influence, as well as has constantly held happiness, simply because it knew how to manage its money account. Of two students equally bright going out into the world from graduation day, one capable in money affairs and the other incapable, the chances—no, the certainties—of a successful career are with the former rather than the latter.

A student's use of the money that comes into his control is therefore of most significant importance. His sense of its worth, his appreciation of the source from which he received

it, his method of expenditure, his power to obtain the best and largest results from it, are elements of his character that he cannot afford to underestimate. Even if it comes to him freely as a lavish gift of wealthy parents, all the more should he be on guard lest misuse of it unfit him for the thoughtfulness that, sooner or later, his own personal responsibilities will demand. Here is where the poor boy, struggling to obtain an education, and necessarily counting every cent he himself can earn, or can secure from self-denying friends, is at an advantage; he must practice self-control, denying himself luxuries, remembering the sacrifice of his parents, and striving to make his resources as far-reaching as possible.

But rich or poor as the student may be, each alike needs the scientific method of using money. Truth applies to money as much as to electricity. Carelessness—not to say recklessness—in the use of money is a handicap. Avoidable debt hurts the moral and mental conception of the man, and prejudices the world against him. The teacher, minister, or engineer who cannot manage his own finances wisely is an unsafe man with whom to intrust interests; the physician, lawyer, or merchant whose methods tend toward bankruptcy would better be passed by.

The student, as a student, may not know the fact, but fact it is, that this world of ours, whose progress depends upon the ideal and whose sweetest experiences are those of sentiment, is still, and so far as we can see, ever will be, exceedingly prosaic. Some day bread must be secured, and perhaps children clothed and educated. Then the man who, years ago, learned how to manage comes gradually to the front; he can provide for a home, can do his part in public improvements, and can keep good cheer. His fellow who failed to see the moral obligations of money, who did not pay his debts, did not feel gratitude to his benefactors, and did not have wit enough to adapt his expenses to his income will be far behind in life's race.

It may be right for a student to borrow money wherewith to secure his education; many men have done so to

their lasting advantage. Such borrowing is justifiable only where a student's industry, thrift, application, and uprightness are worthy collaterals for the loan. But that student does well who somehow succeeds in preserving a good bodily condition and still comes out of college without burdensome indebtedness—such indebtedness is often a long-abiding incubus.

This is the thought that should be in every student's mind: "Other men provided the money by which this institution whose advantages I enjoy was founded and is continued. Here, I am a recipient. When I go out into the world I must be a giver. Thus alone can I show my manliness. Somewhere or somehow I must make my contribution to the welfare of the world. To that end I must now acquire the money habits that will fit me in my turn to be a giver."

With this thought animating him the student will do no dishonorable thing in any business transaction with his comrades or with the institution which educates him. As manager of any student organization, as subscriber to any student movement, as member of any student body, as borrower from any educational fund, he will be as careful with finances as though he were teller in a bank. So doing, he will protect his own integrity, secure the respect of his associates, and hold a mortgage on influence and comfort.

Yes, happy the man so well educated that his finances, whether small or large, speed him on to success.

BUSINESS, TRADE, AND INDUSTRIES

Start at the Starting Point

By CHARLES ADOLPH SCHIEREN

[Charles Adolph Schieren, ex-mayor of Brooklyn, was born in the province of Rhein, Prussia, February 28, 1842. He came to the United States at the age of fourteen, and worked in his father's cigar and tobacco store until 1864, when he became a clerk in a belting factory. In this capacity he remained four years, where he laid the foundation on a small scale of the business of Charles A. Schieren & Co., now expanded to one of the largest concerns of tanners and belting manufacturers in the United States. In 1893 he was elected mayor of Brooklyn and administered that office until the borough was brought into the domain of the Greater New York, on January 1, 1898.]

NO matter how wealthy a young man's family may be, the place for him to start in business is at the bottom. Unfortunately, there are many who think otherwise. They believe that the sons of rich fathers should not be required to "bother" about business until the "old man" becomes incapacitated, either through illness or death, from looking after affairs. Then the young men feel they will be quite content to get into harness and "run" things. That is a fine theory, and on the whole, the young men who hold it are generally honest and well-meaning enough. The trouble is that they do not know how to "run" things when the time comes. That is the main reason why so few old business establishments survive with us. The heirs upon whom the perpetuation of the business would naturally devolve are not inclined to begin as their fathers did, immediately on leaving school. They are not content to learn things from the ground up, and when the father's death puts them in

command they almost invariably make a failure of it, unless there is some outside blood in the concern, some junior partner who is capable of carrying on affairs. But dependence on outsiders is a flimsy foundation to build on. The United States has grown great through its merchants and manufacturers; if it is to maintain its greatness the descendants of these merchants and manufacturers must be content to carry on the enterprises they inherit. To carry them on successfully they must know every detail of the business. To have such knowledge they must start on the lowest round of the ladder in the factory or in the shop.

In my own case, I urge upon my sons the necessity of starting at the bottom of my business and mastering every detail in the art of tanning and manufacturing leather, so that whenever they are called upon to manage the whole or any part of the business they will be competent and can command the confidence of the trade. I hope that when I am ready to retire from the active part of the business it will be conducted as well as, and better than, I myself have conducted it; better, because the young men who are to succeed me will have the advantages of modern training and modern ideas that did not prevail when I started out.

KNOW IT ALL

It was my good fortune to experience when I began business life an object lesson of the danger and annoyance that come to the man who does not understand his business in all its branches. At the head of the firm in whose employ I was as clerk was a strong, forceful, business man. He was an excellent merchant, but ignorant of the purchasing end of his concern, and no practical manufacturer. The result was that he was dependent absolutely on the judgment and good will of his foreman, a drunken, worthless, bullyragging man who made the most of the power that the "old man's" ignorance gave him. Whenever the merchant went into the market to buy material he had to take the foreman with him to tell him what to select. He never

bought a pound of leather without having the foreman tag after him to pass on its value. I had made up my mind to adopt the leather business as a career, and the object lesson given by the domination of this foreman and the helplessness of the "old man" made me resolve that I would study and master the business in all its branches. Though I was a clerk I learned the practical part of manufacturing and learned to operate every machine. I was not content merely to know what a machine did, but investigated for myself the processes by which the work was accomplished. The result was that very early in my career I found many defects in machinery that had for years been accepted as perfect in our trade. This knowledge enabled me to invent many improvements in the machinery and gave me a decided advantage over my competitors when I went into business for myself. I doubt whether any piece of mechanism ever invented is so perfect that the man who acquaints himself with it cannot after a while see a chance for some improvement. To the man who sees, suggestions are constantly occurring.

When electric machinery first came into use progress was long retarded in its general application by difficulties with the belting. At that time there was no direct connection between the dynamo and the engine, as there is to-day. Large belts, made very even, pliable, and of great strength, were required to run the dynamos. The generation of electricity was made possible only by the highest speed, and the machinery ran with such velocity that it required belting of peculiar construction, and in many sections of equal tension, to withstand the great strain.

In the leather trade the new electrical machinery created a demand for big belting—at that time a most profitable branch of our industry. In order to enlarge our business in this field I began an investigation and found that machinery revolving at such an enormous speed formed an air cushion under the belt, which, after a while, threw the belt off. The remedy was very simple, once these facts were understood. We simply punched the belt full of holes. This allowed the air to escape and prevented the forming of the cushion.

That incident illustrates the point I desire to make—the necessity for investigating and understanding everything connected with the business in which you are engaged. This necessity will increase every year. The science of business has changed entirely within the quarter of a century. The key to success is now held by the man who can turn out the best product at the lowest price. Formerly the margin of profit in business was larger, and the field of operation was more restricted, so that a few cents more or less in the cost of producing an article counted for very little. Now competition is so keen that the successful business man must rely upon the volume of his sales for his earnings, and be content to trade on a very narrow margin. The man who can undersell his neighbor by an eighth of a cent is the one who controls the market. The only way such underselling is possible is by making every process of the business perfect. New methods must be constantly studied out, and the most economical processes must be employed. To-day concerns are made or unmade by taking or not taking advantage of savings in manufacture that formerly would have been scorned. In the nature of things it is impossible for a man to hold his own under such conditions unless he knows his business thoroughly.

Exceptional Cases

There are exceptions; cases in which men have made a great success in a business that they entered without any previous training or knowledge. Such a case I may relate which stands out very prominently here in the leather district in New York. The business was founded more than a half century ago by a pushing, enterprising, hard-working man. He had two sons. Shortly after the sons left college their father was stricken with a fatal illness, and the boys found themselves in control of a concern of the working of which they knew nothing. The business left by their father had a wide reputation, but despite this fact it was generally prophesied that the business would suffer in the hands of the

inexperienced young sons. Fortunately these two were exceptional young men. They threw aside all their pleasures and plunged headlong into business. They happened to have the mental equipment necessary for success, coupled with great strength of character. Instead of failing, as every one prophesied they would, they enlarged and built up the business until, to-day, it is far beyond the dreams of their father in his lifetime.

But theirs is an exceptional case, and I can recall only a few other instances. I have seen house after house die out because its heirs were not trained to carry on its affairs.

Training Tells

The thing that undoubtedly helped the young men in the case I mention was the fact that they received a thorough college training. I know that Mr. Carnegie and other distinguished men who have been self-made have gone on record as against a college training for a business man. My own experience does not bear out this conclusion. I believe that nothing so well equips a young man for a successful business career, either as a manufacturer or a merchant, or both, as does a complete college course. If, in addition, he has had special professional and technical training, so much the better. The college graduate loses four or five years of actual experience, but he soon makes up for this if he is made of the right metal.

Of course I am now speaking of the right sort of young men, not the dandy whose college training has given him an exalted opinion of himself. I am speaking of the college graduate who is willing to begin where the ordinary apprentice began; who is willing, if he is going into the leather business, to scrape hides, and if he is going into the counting-room, to do the work of an office boy. In one year such a young man will learn as much about the business as the ordinary boy, unequipped with a college education, will learn in three. He comes to the business with a disciplined mind, and with a taste for research and investigation, which

mean everything in modern business. It is not too much to say that the college-trained man is equipped with forces that enable him inevitably to outstrip those of his competitors who have not had his advantages.

People who think otherwise are misled, I believe, by taking as the basis of their education the conditions as they were and not as they are. Under the old business methods, when our system was as crude as our machinery, it made no particular difference whether or not a man had such training as is required in college. It was more a question of industry, willingness to work long hours and to dispense with ordinary social recreations. To-day business is a science, and the scientifically-equipped man is the one who will succeed. A boy is justified in making any sort of reasonable sacrifice to go through college. He will get a foundation on which, if he is the right kind, he is certain to rear a substantial business success.

Only recently I had in my own business an illustration that bears out this conclusion. In all our departments we try to be thoroughly modern and up to date, because we know that that is essential to continued prosperity and success. My greatest fear is that I shall become old-fashioned, that I shall fail to keep pace with the rapid advance of modern improvements; and I am continually impressing upon my people the importance of pointing out to me any indication that I am slipping behind. Improvement is so rapid that machinery that is of the highest type to-day may be antiquated in six months, and it then becomes the duty of a progressive business man to throw it out and replace it with the modern appliances. It is a costly process as a first proposition, but the new machinery soon pays for itself in a larger and better product. Holding such views, it is conceivable that our appliances are as modern as any.

Learn from Every One

It was a young man fresh from college who taught us otherwise, at least in one particular. He was employed by

us in one of our main tanneries. This institution was in charge of a man who was competent, bright, energetic, and, so far as any of us in the trade knew, thoroughly up to date. The college graduate was put to work in the vats, scraping hides and doing other manual labor necessary to the education of a good tanner. He had not been at work many months when, thanks to his training, he suggested an improvement that saved many thousands of dollars. We had on our premises a deep-well system that supplied the works with water pumped from a depth of seven hundred feet. The pump broke one day, as it had done before, and stopped the works. The young man pointed out that an air pump was much more reliable, much more effective, much more economical. His knowledge enabled him to prove to us his conclusions. The air pump was put in. Then he suggested that the same system might be utilized in other directions and do away with a half dozen small steam pumps that handled the tanning liquids; we could make the one air pump do the work of all, he said, by an inexpensive system of piping. Such economies are invaluable to a manufacturing concern, and we are all striving after them. He also suggested the establishment of a laboratory for the treatment of the spent bark—that is, the bark that had been used up, according to the tanning standards that had always prevailed. His course in chemistry enabled him to make tests of this spent bark which showed that the most improved processes that had been employed up to this time still left a large percentage of tannic acid. We erected a laboratory, according to his suggestions, and now we save this percentage and use up all the acid in the bark.

That young man has a career beyond a peradventure. He has realized on the expense of his college education. It by no means follows, however, that every man should go to college. This question must be determined in each case separately. Where there is a strong disinclination it would be a waste of time and money to force a boy through college, and in many cases it might ruin his usefulness in after life. The amount of harm done in this world by parents

who force their children into a scheme of life improperly adapted to the inclination and abilities of the children is incalculable. It is also inexcusable. Without exception it is always the case that the vocation for which a young man is specially fitted is manifest long before the period when his future is to be fixed upon. The young man himself generally has a very clear idea of what he would like to do, and this idea, carefully sifted and discussed, generally forms a very safe guide. Too many boys who have no business talent are forced into business. They might make excellent artists or writers or lawyers or physicians, but because their fathers happen to be merchants or manufacturers they, too, are compelled to become merchants or manufacturers. The whole future happiness of a boy is made or unmade by the choice of his occupation, and no question should be more carefully weighed. The boy himself, if he feels himself unfitted for the pursuit selected for him, should make vigorous protest.

PLANNING ONE'S FUTURE

Of course I do not mean that he should be rebellious and disobedient; but, after all, it is his own future that is being decided, and he should see to it that he has a voice in the decision. He should examine himself very carefully and then present his case to those who have his disposition in charge. To force the boy with a mechanical bent into a countingroom is like forcing an oak into a conservatory. The successful men in this world, and the happy ones, are those whose occupation has been fitted to their special capability. The boy who would make a good manufacturer is rarely fitted to be a good merchant. This being the case, he should associate himself, when he enters business for himself as a manufacturer, with a man who is a merchant and who understands how to introduce the goods which he manufactures.

The desire that boys shall be in the business promising the greatest financial returns often results in forcing a young

man into a sphere in which he becomes, perhaps, an indifferent success. Even if he becomes a wealthy banker or merchant, it is by no means a certainty that the choice he was forced to make was best. Money is not the only thing in life. In fact, money ranks pretty far back among the desirable things to be gained here on earth. I mean, of course, money for itself. The possession of money is an excellent thing; it is essential to our comfort and well-being, but the young man who sets before him the making of money as the main object of his life will find himself terribly mistaken in later years. Money will come of itself; there is no great difficulty in that. Let the young man start out right, start out in a thorough fashion, knowing all the ins and outs of the occupation he has chosen for himself, and the possession of money will come inevitably. A man should learn to control money and not permit money to control him.

When Mr. Carnegie started out in life he had no idea that he would ever retire with two hundred million dollars. His fortune came as the result of his close application to a work for which he was especially fitted. The men who start out at the beginning with the idea that money must be made regardless of everything else, generally get into trouble and almost invariably fail miserably. Even when they accumulate the money that they have so yearned for it becomes a curse rather than a blessing; they do not know how to enjoy it nor how to enjoy life. The formation of character, the building up of a reputation for honesty and straight dealing, and the living of a clean life, are much more satisfactory than the possession of millions. Money is worth only what you can get out of its possession, and I know plenty of men who are worth millions and who are yet the most miserable creatures in the world.

Nothing is more pernicious than the idea, often advanced, that money makes the man, regardless of how he got it. In politics some men have grown rich through dishonest practices, but none of them, so far as I could ever see, got out of life what he might have gotten if his money had been untainted. And even in politics the men who are both suc-

cessful and dishonest are comparatively few. People generally may not believe this, because, somehow, they seem to think that the average man in politics is necessarily a crook. As a matter of fact, the standard of honesty among politicians is very much higher than outsiders give them credit for. Somehow we have gotten into the habit of making all sorts of general charges against men who are in political life. While I was mayor allegations were made again and again against men in office. I always made careful investigation, but found very little to warrant such charges. It is a very serious drawback that men, no matter how honest they may be, cannot go into politics without laying themselves open to charges of corruption. When I assumed office the city of Brooklyn was entirely in control of the Democratic machine politicians. I went in as a reformer and studied the situation conscientiously. As a result, I have no hesitation in saying that the average public official and employee is about as clean and honest as the average man in business or elsewhere. Crookedness pays no better in politics than it does in business, and that it does not pay in business can be demonstrated by any one who tries it.

The most valuable asset a business house has is a reputation for honesty. The young business man can well afford to sacrifice temporary gain secured at the cost of straightforward methods, and accept a temporary loss that comes through right dealing. No great house in the world has ever knowingly done a dishonest thing; that is an axiom. The man who starts out in the retail business by giving short weight will never establish a wholesale business. In our own concern enormous business transactions are conducted entirely on faith and the reputation of the firm we deal with. We buy hides by telegraph from Armour & Co. and other standard packers in Chicago, and have them shipped to our tanneries and pay for them without seeing them. Mr. Philip Armour, from the very outset of his career, was known in the trade as an honest, square-dealing man, who never took advantage of those who traded with him; he always delivered the goods that they ordered, and

we have faith in his firm accordingly. When we buy hides of a concern that has no such reputation we make a most careful inspection. Therefore the value of honesty as an asset is clearly manifest.

When I started out for myself I was tempted, as all young business men are, with propositions involving dishonest practices and bribery in one form and another. I always let those chances go by, because I felt their unsoundness as business propositions. Sometimes it was pretty trying to see men who had no scruples making a lot of money, but experience soon taught me that their good fortune was only temporary. At this day I know of no concern, either in my own line of business or outside of it, that started out on crooked lines that maintained its success.

Ruin in Trickery

Even the man who is instinctively dishonest will find it pays him to be honest in business and to let the other fellow take advantage of the crooked opportunities. I could relate many instances in my business experience that prove this, but a few will suffice. In one case a bright, smart, young man made two thousand dollars on a failure by making a compromise with his creditors. He came to me afterward and boasted over his sharpness; to-day he is walking the streets, a poor, wretched being, who attributes his failure in life to hard luck.

In another case a man who was in business in my neighborhood realized a thousand dollars by selling a large block of goods on the strength of false statements. It seemed a large sum of money, a fabulous sum in those days to me, and for a time it appeared to me that there was not really very much in the doctrine that "Honesty is the best policy." But after a few years that man was a bankrupt.

Another firm, composed of three bright men, started out to get the best of all their competitors by bribing employees in the houses with which they did business. Two of those men died drunkards, and a third wound up his career on the streets, a total wreck.

As business is shaping itself to-day, dishonesty is even a worse handicap than it was under the old conditions. The vast combinations of capital that are coming, in all pursuits, make exact conditions imperative. To the straightforward man, who knows his business from the bottom up, the new conditions offer even better opportunities than did the old, but they also present more exacting demands. They require absolute knowledge of the branch in which the young man operates. They prohibit the spreading over too much ground. The young man needs to stick to one thing and master it. He needs to study closely the mistakes he makes and to profit by them. If he does this, success will crown his efforts.

The Making of a Merchant

By HARLOW NILES HIGINBOTHAM

[Harlow N. Higinbotham, a Chicago merchant, became well known as president of the World's Columbian Exposition in 1892. He was born at Joliet, Ill., October 10, 1838, acquired his education at Lombard University, Galesburg, Ill., and at the Commercial College of Chicago, after which he went to work as clerk in a store, and later engaged as clerk and cashier in a bank at Joliet. From 1861 to 1862 he worked as bookkeeper in the dry goods house of Cooley, Farwell & Co. of Chicago, then entered service in the Union Army, serving as private in the Mercantile Battery of Chicago, and finally received the appointment of chief clerk with the chief quartermaster in the department of the Ohio. In 1865 he entered the dry goods house of Field, Palmer & Leiter, and in 1868 became a partner in the reorganized firm of Field, Leiter & Co. Since 1881 he has been a partner in the firm of Marshall, Field & Co.]

COMMENT of any practical value on the subject of the mistakes most frequent among boys and young men entering on a business life is certain to meet with one criticism, which may be epitomized in the single word "commonplace!" And why? Because these faults are so common that they are impressed on the attention of every large employer of labor, particularly in commercial lines, and he is compelled to reiterate them with emphasis and tiresome persistency. If they were less common, less universally recognized, and uniformly disapproved by employers, their enumeration would not appeal to their victims as commonplace, stereotyped, and uninteresting.

Occasionally, however, a boy or young man of sufficient character and receptivity is found who is willing and eager to

profit by advice from those of long experience, even though it may be given in painfully familiar terms and may sound sage, tedious, and "preachy." It is in the hope that younger readers are animated by this spirit of tractability that these suggestions and comments are made by one whose views are the result of thirty-eight years of experience in unbroken connection with an enterprise that has had many changes in the personnel of proprietorship and now has more than five thousand employees.

In the course of that service he has filled various positions, from the very humblest to that of part proprietor and manager. With the exception of his earliest years all this period of labor has brought him into direct personal contact with the young employees, and the responsibilities of his position have compelled a daily and unremitting watchfulness of their conduct with a view to determining the faults and mistakes which most beset the young adventurer into the mazes of commercial activity.

A Boy's Importance

As the majority of business positions to-day are filled by men who entered the harness as boys, the manner in which a boy looks at his first employment is of fundamental importance. Generally he does not take himself or his duties with sufficient seriousness. He is inclined to think that he is "only a boy," and that his work is of boyish inconsequence. Nothing could be further from the real facts than such an impression. To realize this it is only necessary to go into the office of any large establishment—the business heart of a commercial enterprise—and observe the swarms of boys that flit between the desks of the older workers.

Who is always at the elbow of the executive head of an establishment of this kind? A boy. He comes into closer and more continuous contact with the proprietor, the general manager, or the department head than any adult. Because he is "only a boy" he is party to private conversations and transactions from which even the "confidential man"

might be barred. This means responsibility and opportunity, and his conduct is, therefore, of greater personal interest and moment to the business executive than he is generally inclined to think.

Boys fail to satisfy the demands made upon them more through lack of promptness and punctuality than by any other reason. Thousands of dismissals, rebuffs, discouragements, and failures at the beginning of a career could have been avoided by these small workers had they made a cardinal point of being always on hand in their proper places during every moment when subject to duty. It is not enough that they should be generally at their stations. The time is sure to come, no matter how sparingly they allow themselves the indulgence of straying only a little from the rigid requirements of office rules, when they will be suddenly wanted—and will be found wanting!

Many fall into the habit of being a few rods, or perhaps only a few feet, from the spot where they are expected to be. This means that the busy employer must leave his desk or resort to a little extra effort to secure their attention. The actual inconvenience may seem trifling, but he is annoyed. If very charitable, he says "that's the boy of it," and patiently gives the little toiler another chance. But the boy has failed to come up to reasonable requirements, and suffers accordingly in the estimation of the man who depends upon him for certain service.

Another seemingly petty fault very common to the younger employees is the habit of watching the clock. This is little short of infuriating to the man who is genuinely and seriously absorbed in his business. It tells him that the spirit of timeserving, instead of the welfare of the business, is the controlling force in the work of such an employee. This is peculiarly irritating to the man who has a thoughful and conscientious grasp of the serious side of business life. Any large employer of labor, particularly in office positions, will place heartfelt emphasis on the advice: Let the clock take care of itself, and show a disposition to be useful without regard to time or closing bells! This is a

secret by which a boy or young man of even mediocre talents may win the approval of those whom he serves. "Anything but a timeserver!" has been the exasperated exclamation that has preceded many a dismissal.

Quickness to perceive the little things which annoy a busy executive and promptness in removing them has secured the promotion of scores of boys and young men who, as the saying goes, "have their wits about them." Proprietors and managers of large businesses are human and susceptible to those delicate personal attentions which count so largely in home and social life. And the fact that such an attention comes from a boy, and amid the hurry of business and the commercial surroundings of an office, only goes to make these exhibitions of thoughtfulness more acceptable, pleasing, and conspicuous.

As to the matters of conduct on the part of the employees which may appear to be of greater moment, it is worth while to lay stress on the characteristic of decision—the inclination to act quickly on individual responsibility and stand by the consequences. Rashness may be less at a premium in commercial than military life; but timidity is as much to be avoided in the one as the other field of activity. Better, by far, make an occasional mistake of judgment than to halt and hesitate over the routine items of business and consult a superior on affairs which are not of sufficiently unusual a character to demand the special exercise of executive discretion and authority.

Ready for any Duty

Readiness cheerfully to go anywhere at a moment's notice and at whatever personal inconvenience, to remain absent from home for any length of time that the exigencies of business may demand, and to make the interests of the employer his own, is a most appreciated quality in an employee. It never fails to secure appreciation. A turning point of this kind in my own experience so aptly illustrates this observation that its introduction here may be pardonable.

In those early days travel by rail was a positive hardship compared with present conditions. Sleeping cars were unknown, and trains jolted over rough roadbeds at snail pace. It took twenty-four hours to go from Chicago to the Missouri River, and the most active young man was not anxious to leave his home and suffer the inconvenience and hard knocks of such a trip. One day, however, I was called into Mr. Leiter's office and asked if I would go out to a distant prairie town and attempt the collection of a bill of $1,400 against a country merchant. That meant much more then than it would now, and although I realized the responsibility of the mission, and its difficulties and hardships, I promptly and cheerfully accepted the proposal.

From the moment I took the train I had no other thought than that of accomplishing the object for which I had been sent. I determined to get that money, no matter how long I had to stay for it, or how much hard work or inconvenience might be involved.

Arriving at the little village, I found that a representative of another wholesale house, to which the merchant was indebted in the amount of $4,000, had been there before me, looked the ground over and left on the next train, abandoning his mission as hopeless for the time being.

I was not "making trains," and frankly told the storekeeper that I had come to stay until I could go away with the firm's money in my pocket. When he grasped the situation he disclosed all his private business affairs to me, and I found he owned the local grain elevator, the hay scales, and other "outside deals." Then I secured from him an option on these, went to other men in the town and disposed of them. This reduced his account by several hundred dollars.

Then I made a list of the accounts he held against farmers and other residents, secured the notes of the most responsible debtors, and discounted their paper at the bank. Finally I took back to Chicago a number of pieces of valuable dress goods, of which the merchant had an overstock.

All these things satisfied the claim which I had been sent to collect. It was a proud moment for me when I went into Mr. Leiter's private office and gave an account of my week in the prairie town collecting a bad debt. That trip had a strong and direct influence in my advancement. It taught me a lesson, and if it may do as much for any young man of to-day its narration is justified.

Occasionally employees count on their church and Sunday school connections and activities as a means of impressing their employers with their worthiness. This is a misjudgment of human nature, and a mistake. Nor is this view any reflection on churches or religion—although it is an undeniable fact that to-day a man's credit is not strengthened by his church alliances. That which injures a young man's standing with his employer in this event is the fact that he seeks, directly or indirectly, to make business capital of his religious affiliations. It is not what a man believes or professes, but what he is and does that gives him standing and credit. A man may make a fad of so good a thing as a Sunday school, and it matters little what the fad followed by an employee may be, the moment its existence is known to the employer the latter regards it as an interloping interest likely to distract the mind from business. This feeling may be selfish, and perhaps unjust, but its recognition is not to be ignored by the discreet employee.

The knowledge that an employee belongs to a club that is not distinctly beyond his means is not a detriment to his advancement. Often it is an advantage. An early marriage, unless unfortunate, is a benefit to the young salaried business man. It is difficult to conceive of an employer so devoid of human feeling that he will not take into consideration the dependent wives and children in dismissing and hiring employees. If compelled to choose between a single and a married man of equal merit, the conscientious employer will invariably select the latter. Generally he will even "stretch a point" in favor of the man of family.

The young man who saves and invests a portion of his earnings always commands the respect and confidence of his

employer. While building and loan associations have done much to stimulate this spirit of prudence, I am convinced that good bonds offer a better, safer, and more profitable medium of savings investment.

In the Wholesale Business

By HARLOW NILES HIGINBOTHAM

IN the United States navy no officer is eligible to promotion until he is able immediately and without further preparation to discharge the full duties of the position just ahead of him in the line. More than the navy, perhaps, this principle of advancement holds good in mercantile life, and particularly in its wholesale branch. So important is it that I should place it first among the things to be observed by the young man beginning his business life in the employ of a wholesale house. Always he should be reaching out for the definite and practical knowledge that will enable him to do the work of the man immediately above him.

To do this does not imply that he need make that man feel that some one is trying to push him off the pay roll or crowd him out of the house. Neither does it carry the implication that the ambitious young employee is justified in neglecting the slightest detail of labor belonging to his own position in order to familiarize himself with those of the man into whose shoes he hopes to step. Either of these inferences is absurd and unwarranted—a fact which will not hinder certain persistently impractical persons from at once drawing such a conclusion. The man who has enough native tact to become a successful merchant will not advertise his ambitions for promotion to the discomfort of the man whose place he hopes to secure; but he will quietly and persistently absorb the information which will enable him to

discharge that person's duties provided the latter were himself suddenly promoted. On the other hand, the man who should hope to win promotion by neglecting a present responsibility for the purpose of studying a future one would display an unpardonable lack of ordinary common sense.

Prepare to Rise

But in any event let it be clear that in the struggle for advancement in the employ of a modern wholesale house the boy or young man who is content to do only the task assigned him without any interest in that process of the work next beyond him need not hope for promotion. If it comes to him it is because the person who must determine the promotion has not been sufficiently alert to detect the lack of a normal curiosity, to say nothing of a proper self-interest.

As in the navy, so in the big wholesale establishment, there is little or no time for learning the duties of a position after having been promoted to it. Especially is this true of the higher places of an executive character. Responsibility does not wait upon personal convenience or the slow process of leisurely apprenticeship taken while in the enjoyment of the honors and emoluments of a journeyman. Under the high pressure of modern business life full exercise of authority and a complete shouldering of responsibility must begin at the moment a man nominally assumes a position—and generally they begin before he takes the place as his own. It is for this reason that I place so much emphasis upon the necessity of learning how to do the thing not required to-day, but which may, by virtue of some sudden emergency, be demanded to-morrow, when there will be not a moment for "getting posted."

I doubt if to-day there is a man at the head of a department in the large wholesale enterprise with which I was associated for many years who has not won his place through the consistent exercise of this outreaching for a knowledge of the thing immediately in front of him. Generally, however, a man is most impressed by the achievement of the

person succeeding in a field of effort other than that in which he is struggling, and I shall therefore illustrate my point by reference to the career of a man who has made his name widely known in the grain trade.

A Telling Example

He started in by tending the telephone at a grain elevator and "keeping the weights"—that is, copying the scale tickets into a book—when not busy at the 'phone. He made it a business always to be "caught up" with his work, so it often happened, when he went to the scale floor for the tickets, that they were not ready for him. This gave the young man leisure to become familiar with the weighman's work and with the scales and machinery of the elevator. Occasionally he induced the weighman to let him tend one scale, and later two scales, until he became thoroughly familiar with the work. About this time his employer built a new elevator and the young man applied for the position of timekeeper. Undismayed by the reply that the timekeeper would be expected, in addition to his regular work, to tally and record every load of lumber, stone, brick, sand, iron, and other material going into the construction of the elevator, he eventually secured the position. The elevator was built by day labor instead of by contract. The first day twenty men started work, the second day there were forty, the third day sixty, and so on until the full quota of nearly two hundred men was engaged. Despite the fact that these laborers were of almost a dozen different nationalities, the young timekeeper so familiarized himself with their names and faces that he was able to call by name each man who had worked for even a single day. He could also tell, quite as readily, in what part of the building each man worked, and he missed at once any laborer who stole away for an hour or two at a neighboring saloon. When the elevator was completed a weighman was needed and the young man applied for the position. After convincing his employer that he understood the work and that he had watched

the construction of every grain spout, and therefore knew into what bin each one led and that he would not have to learn that anew, he was given the position.

He soon became so expert that the weighing did not require his entire time, and during moments otherwise unoccupied he turned his attention to the working of the cleaning machines on the same floor, and was finally allowed to tend these machines in addition to the work of weighing. He became an expert in the art of telling at a glance the exact grade of a given sample of wheat, and during this schooling he managed to learn from the foreman just how grain is mixed to produce a given grade. His perseverance in learning everything that could be learned about the business soon gave him the name of being the best grain expert in the elevator. He held this enviable position in the eyes of his fellow-workers for a number of years. One day one of the young man's employers came to him and said: "I am going to buy you a membership on the Board of Trade. You can buy car lots down there. I have been watching you, and I hear from people around here that you are as good a judge of grain as there is. You are just the fellow we want."

Then began his career as a commission merchant. But the keynote of his advancement from one position to another was that of learning how to do the work of the position next in the line of promotion. It works in the general mercantile business as well as in the grain trade.

Master the System

I have been asked to designate certain books and articles which may afford practical assistance to young men seeking to get on in the field of wholesale merchandising. This I shall do in concluding this article; but I shall fail of my full duty if I do not make it very clear to every reader that no amount of "outside reading" can take the place of, or compare in importance with, the lessons to be learned by actual observation in the rush working hours. When the

lessons which fall under the eye of the alert observer are amplified by means of judicious inquiry, then decisive progress is inevitable. And without this no amount of "parallel study" or theoretical research will avail.

In the first month of service in a large wholesale establishment every employee should become complete master of the general structure of the enterprise. That framework of organization by which the enterprise is sustained should stand out as clearly before the eyes of the boy or young man who has become a part of its mechanism as would the beams, sills, braces, and other timbers of a cabin being built by his own hands and destined to be his lifelong home. Grand divisions, subdivisions, and departments should be sharply defined and their relationship understood.

He should be able minutely, and without the omission of a single step or detail, to trace any article of merchandise from the moment of its arrival inside the house until it is in the hands of the retailer. Not only this, but he should also be able to furnish an equally accurate and detailed narrative of the process, in the way of accounting, which accompanies and records the passage of this piece of goods from the receiving door to the shipping platform.

This is equivalent to learning the main thoroughfares and car lines of a strange city. After that has been accomplished the newcomer has the far more subtle and difficult task of becoming acquainted with the inhabitants of the place, and of learning the peculiar traits and characteristics which give them their individuality. So in the wholesale house. After the boy who has begun his apprenticeship has learned the main points of the compass, and can trace any kind of goods on its journey through the wholesale house from factory to customer, he must still acquaint himself with the *personnel* of the establishment; and it is here that he will learn what gives the house its individuality, its points of difference from other enterprises in the same line of trade. And in proportion as he is able to discern the "personal equation" of the house, of its officials and department heads, he will demonstrate his fitness for commercial life, which

mainly is the game of judging human nature and of following a well-ordered system and method of doing things.

Any boy of fair intelligence who applies himself faithfully to the task of getting his bearings in this particular will be able to tell, in a very short time, what may reasonably be expected of any particular man in the house—how he does his work, what he expects from those under his charge, how he conducts himself toward those in authority over him, how he administers and receives discipline, on what points in business ethics he is most insistent and where he is inclined to be lax or lenient, what is the surest road to his approval and to his displeasure, and—most important of all—what are the peculiarities which make him most valuable to the house and secure his permanent employment and advancement.

These and a score of other equally significant inquiries should come spontaneously into the mind of every wide-awake boy or young man and find insistent application to every man of any importance in the house. And if this close study and observation of character is not spontaneous it should be cultivated until the young student of human nature is able to foretell with reasonable accuracy the line of action which any of his superiors will follow under given conditions. When he can do this well he will have mastered one of the most important problems in the course of his training, for he will know the particular forces which make the personality of his house, and he will have learned how to estimate men and forecast their actions.

JUDGED BY RESULTS

Naturally one of the first things for the beginner in the wholesale house to decide will be whether he will cast his lot with the selling or the "office" branch of the work. Too often this is determined by chance or circumstance instead of by thoughtful selection on the part of the person concerned, and results in placing him for life in a line of effort for which he has less liking and capacity than one he

might have chosen to follow in the employ of the same house. Some men are natural salesmen; they have the selling instinct keenly developed, and it is as natural for them to convince customers of the merits of goods as to breathe. For a young man gifted with this selling capacity to work along the course of an "office" career is a lamentable waste of material. But this is constantly occurring because beginners get started in situations not in the line of their best abilities, and continue therein for no other reason than that they are started there and have not enough discernment to see that they are not working along the line of least resistance, or because, seeing this, they have not enough decision or force to find a place of the sort for which they are best adapted. In many cases, however, they lack enough force and decision to discover their own natural bent and to shape circumstances to develop that tendency. Of such it is sometimes observed that they do not know their own minds because they have none to know. While this may be a trifle harsh it is altogether too true, and those who merit this criticism are the "hewers of wood and the drawers of water"—those who continue to do the rougher and poorly paid work of a large establishment.

There is but one criterion by which all men in modern mercantile life are judged, and its name is Results. Once a salesman complained to the executive head of a large wholesale house that the morals of the manager of a certain department were not what they should be. The answer of the executive partner was: "All I know of Jones, or need to know of him, is written in the figures of my red book of balances. That tells the story every time. It tells me that Jones produces results—large ones, which are down in big figures on the right side of the ledger. I don't go to this red book to determine my friends and social acquaintances, those whom I invite to my home. But it does settle who shall handle my goods, and it gives me all the facts I need to make up my mind on that score."

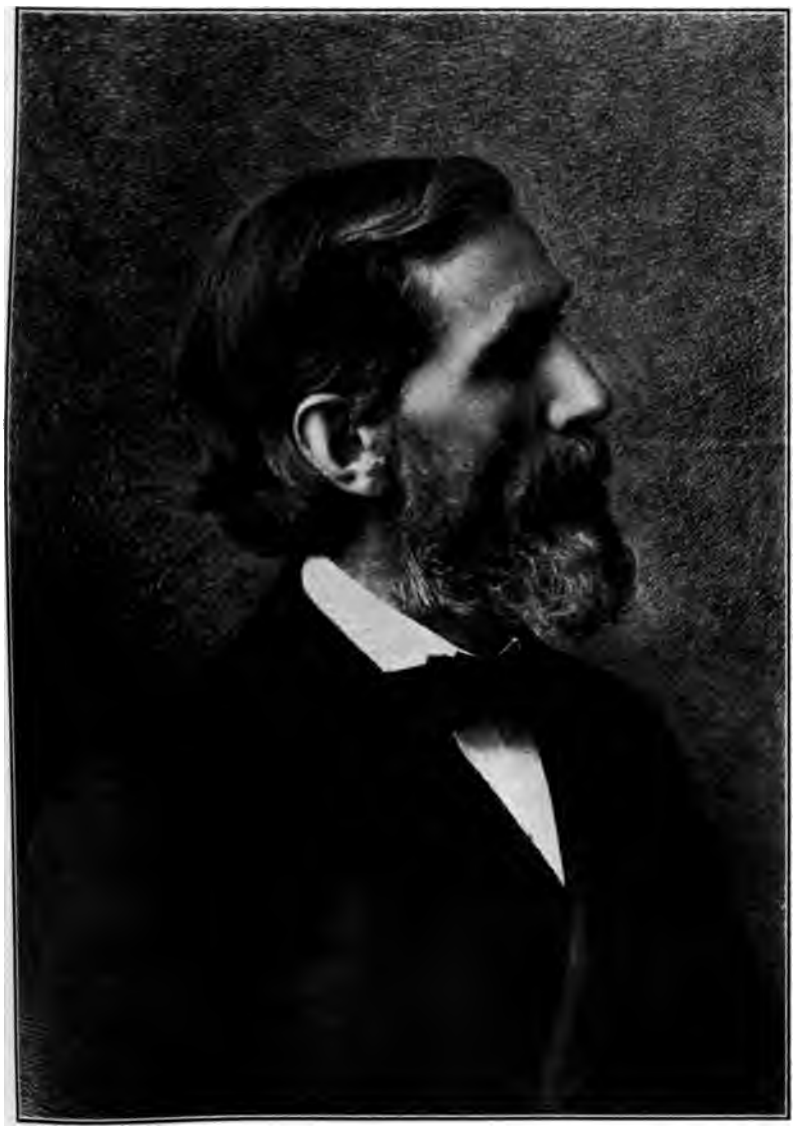
This may have been a too radical statement, but it well enforces the point that results are the final elements on

which the man in mercantile life must rest his case. Reasons and excuses will not avail. Personally I hold that no business man can afford to ignore the morals of his employees; but at the same time the man whose work yields large profits to the house with which he is connected generally has little fear that anything save a suspicion against his honesty will cause his firm to dispense with his services so long as he keeps his record as a profit producer. Therefore the men who make the greatest progress are those who can stand the test of the book of balances, who do not weary their superiors with excuses for and details of unsuccessful undertakings, and who accept the responsibilities of their positions and abide by results. Salesmen who try to make up for lack of orders by voluminous correspondence telling why they did not sell the goods do themselves harm instead of good through their epistolary efforts. The only kind of correspondence which does the salesman any great amount of good is that which is checked up in the shipping room.

In the same way the credit man comes to the final test of results: the percentage of loss in poor accounts. If this is very small—say, perhaps, from one-tenth to one-twentieth of one per cent—and if the selling department cannot show that in order to keep losses down to this point he has contracted sales beyond the point of profit and good sense, then he is entitled to feel that the verdict of results is well earned.

BOOK-HELPS

There seems to be a great demand in these days for outlines of home study courses, which the ambitious boy or young man may follow in his leisure hours, and thereby add directly to his business efficiency. The possibilities of such a course for the beginner in a wholesale mercantile house are almost unlimited, but the books to which he should be referred can only be suggested by the nature of his individual work. Do his daily tasks bring him into contact with laces or shawls or tapestries and carpets? Then let him go to the public library and secure books which will place before him



HARLOW N. HIGINBOTHAM.

the history of lace making, of shawl, tapestry, and carpet weaving. By persistent reading, supplemented with keen observation of the goods themselves, he may soon learn to judge of their relative values and their artistic merits. There is scarcely an article known to wholesale commerce which has not a literature of its own. And the beginner who at night reads about the articles which he handles in the daytime will find them far more interesting, and he will be able to talk intelligently and entertainingly of them to others. There are few books of any especial value, so far as I am informed, which have been written with especial reference to the needs of learners in the field of wholesale merchandising. Nearly all those which are likely to prove helpful to beginners in this business apply broadly to all who seek success in other lines in the world of affairs.

In Sir Arthur Helps' "Essays Written in the Intervals of Business" may, perhaps, be found more shrewd and homely wisdom and sound philosophy regarding business and the principles which lead to success than can be found in any other volume, excepting, of course, the Bible. Almost every faculty required in achieving a substantial business success is there analyzed in the most clear and searching manner. The young man who is ambitious to get ahead in commercial life, and who will master the principles so simply but adroitly set forth in this little volume of essays, will not need to follow any elaborate course of reading.

Probably the most valuable book relating to the more technical side of merchandising is that called "How to Do Business as Business is Done in the Great Commercial Centers," by Dr. Seymour Eaton. This is a sensible treatise on the most essential forms and definitions, and it also takes up, in a very entertaining manner, the trade features of the great commercial nations of the world; also it has a commendable chapter on commercial law.

For the young man who is particularly interested in export and import trade I should recommend "Modern Business Methods," by Frederick Hooper and James Graham. Although this is an English book it is very comprehensive

and contains a large amount of information which would be of practical use to an executive in an American house importing large quantities of goods.

A very practical volume, by P. R. Earling, which should be read by the beginner who has an eye on the credit desk, is called "Whom to Trust."

In the Retail Business

By HARLOW NILES HIGINBOTHAM

IN discussing the entry of a young man into the retail business there are certain things that are so fundamental that they must be taken for granted. Without them there can be no permanent or substantial success in any undertaking. Among these requirements are character, integrity, and a fair "business head."

The first rule which a young merchant going into the retail trade should make for himself, with heroic determination, is that of doing a business consistent with his capital. Failure to observe this rule is the rock on which thousands of promising commercial undertakings have gone to pieces. Whether the capital put into the enterprise be large or small, its size should absolutely govern the volume of business.

What should we think of an architect who would start a building on a foundation forty feet square and then build without reference to its limitations until the structure completely overhung the underpinning on all sides? Yet this is precisely what thousands of young retail merchants throughout the country are attempting to do. They try to brace up their top-heavy structure with the timbers of fictitious credit. These may hold it in fair weather, but when the period of storm and stress comes—as come it surely will—this false support will come crashing down and the enterprise tumble with it.

My individual conviction is that the only way in which a

retail business can be conducted on lines absolutely consistent with its capital is on the cash basis. For this reason I would not advise any young man to make a venture in retail trade on credit lines. It is too much like working in the dark. Almost inevitably the accounts grow beyond your control, and the business structure expands at the top while the foundations weaken.

CASH OR CREDIT?

In certain communities conditions seem to be such that it is practically impossible for the young merchant to introduce the strictly cash method of doing business. In this event he has but one hope of success—that is, to watch his accounts with a zealous vigilance that never relaxes, and to act with promptness and decision in the matter of credits and collections. This may require a high order of business and moral courage, but he must be able to do it if he would avoid wreck.

In his dealings with his creditors, the wholesalers, let the young merchant keep firmly to the rule of incurring no obligation that he cannot with certainty meet in sixty days. Too much emphasis cannot be placed on his connections with the wholesale house or houses from which he obtains his goods. At the very beginning of his venture let him go to the credit man of the wholesale establishment and state his case without reservation.

So thorough and searching are the means employed by the big wholesale houses to obtain an accurate knowledge of the standing and affairs of their debtors that it is practically hopeless for the latter to attempt any concealment of unfavorable conditions. Again, the credit men of the wholesale houses are the keenest men in the business, and their judgment of human nature is quick and shrewd. Then it should be constantly held in mind that the honesty of a patron seeking credit is half the battle, and that their confidence is won by an ingenuous statement of affairs that does not spare the one who is asking for credit.

The first interview of the young retail merchant with the credit man of the wholesale house is sometimes a trying ordeal in which many uncomfortable questions have to be answered. This may incline the beginner in the retail trade to avoid the credit man after the initial interview has been successfully passed. He could make no greater mistake than to allow this association with a disagreeable ordeal to alienate him from a close acquaintance with the credit man. To the contrary, he should improve every opportunity to strengthen and build up a confidential relationship with that important functionary of the wholesale house. Not once, but constantly, should he acquaint the credit man with the real condition of his affairs, and should ask and follow the advice of this counselor on all important matters. The more he does this the better will be his standing with the house and the safer will be his course. Advising patrons is one of the most important duties of the credit man. I place great emphasis on this matter because its importance is so often overlooked by young men starting in the retail trade.

Another cardinal point in the success of the retail merchant is that of having a small but frequent influx of new goods. This is founded on a universal trait of human nature which craves "something new." There is a subtle flattery, practically irresistible, in being shown goods that have not been exposed to the eyes of others in the town.

"Here are some of the latest styles," says the retailer as he reaches into a packing box and takes out a bolt of dress goods. "They have just come in, and no one has seen them. You may have first choice if you wish." This argument seldom fails to effect an immediate sale. And even if it does not do so, the woman to whom this courtesy is shown goes away with the impression that the young merchant is wide awake and thoroughly up with the times.

The dealer who puts in a small stock at the start and keeps constantly adding thereto with fresh but limited invoices has an immense advantage over the tradesman who buys in large quantities and does not freshen his stock for six months at a time. In these days women are the most nu-

merous and important customers of the retailer, and they do not like to see the same old goods. They will trade where they can find something fresh every time they call.

Slow and Sure

All big businesses have had small beginnings. I do not know an exception to this rule. This means that a successful enterprise must have a normal, substantial, and legitimate growth. If a young merchant finds himself in quarters larger than he at first demands, he should change for smaller ones or partition off a portion of his room at the back. The latter is better than attempting to put in a larger stock of goods than his trade really demands or his resources warrant. It is also better judgment than to attempt to "spread" his stock over a large space for the mere purpose of filling up.

While the proprietor should be the first at the store in the morning and the last to leave at night, and should be always ready to do anything that he would ask his humblest clerk to do, he should always remember that he must do the headwork of the business. He can hire a boy to candle eggs, sweep out, and deliver goods, but if he does not do the thinking and planning it will not be done. That is something that the most faithful and conscientious clerk cannot do for him. If he allows the physical part of the work so to encroach on his time and energies that he does not find opportunity for a frequent and thoughtful survey of his business, he makes a great and a common mistake. This principle is stated forcibly, if uncouthly, in the old expression, "Let your head save your heels."

The young merchant who takes time, at regular intervals, to make a close summary and analysis of his accounts, and takes his bearings so that he knows precisely his position on the sea of business, is the man who will succeed. In other words, the mental part of the business is its most important feature. However, I hold that, at more or less frequent intervals, the storekeeper should personally do every task about the establishment for the sake of influence and

example. Let him take the broom from the hand of the boy and show the latter how to "sweep out" without stirring up a dust or leaving dirt in the corners; this will give him added respect in the eyes of the boy, and the store will thereafter be cleaner by reason of the example; and so with every other task, no matter how trivial or humble.

Then the young merchant will do well always to bear in mind that courtesy is the biggest part of his capital. This does not mean that he should be obsequious or fawning, but simply and invariably attentive to all who enter his place of business.

Business Arts

The matter of advertising is not an unimportant detail. In the local newspaper the young retailer may wisely use a limited amount of display advertising space. This will be most advantageously occupied by a simple, dignified, and modest announcement of new goods. Like his stock, the subject-matter of his advertisement should be kept fresh by constant change. It should also have the individual quality both in its wording, form, and type—something that expresses the personal good taste of the advertiser.

There is no doubt that a neat circular or folder sent personally to patrons is a strong method of advertising. Such announcements may be delivered by messenger or distributed through the mails. Best of all is the neat, personal note, written to the merchant's best customers, calling attention to fresh arrivals of goods. The spare moments of a young merchant may be put to a far less effective use than this writing of individual advertising letters.

It is scarcely possible to put too much emphasis on attractive window displays. Here, again, the element of constant freshness plays an important part. The displays should be frequently changed, and, while striking, they should never fail to have the quality of good taste. Good statuary, pictures, curios and art objects of every kind may be used to unfailing advantage in dressing windows, and they always

command the attention and admiration of women. It pays the enterprising merchant to secure the loan of works of art for this purpose—and they are not difficult to obtain.

In looking after all these details, which are of importance in the general result, the young retailer should not fail to keep a proper perspective of his business as a whole. He should know just where he is sailing, and be sure that he is not drifting. In this way he will become a safe pilot, and will bring his enterprise into the harbor of success and independence. And the prosperous retail merchant is a very independent and respected member of the community in this country, where the honest tradesman commands the regard to which he is entitled.

BUSINESS, TRADE, AND INDUSTRIES

The Bank Clerk

By GEORGE GILBERT WILLIAMS

[George Gilbert Williams, president of the Chemical Bank, New York City, was born at East Haddam, Conn., in 1826. He was educated in the district schools and village academy, after which, removing to New York, he entered the Chemical Bank, in December 1841, as assistant to the paying teller. He was only twenty years of age when he was himself made paying teller, and at twenty-nine was advanced to the desk of the cashier. He served the bank continuously until he was elected its president—January 2, 1878. His activities extend beyond the institution of which he is the head, and he has served as director to several other financial and charitable institutions.]

TO the young man who contemplates entering the banking business, believing it to be a quick and easy road to fortune, I would offer "Punch's" advice to those about to marry: "Don't."

While it is true that any youth of fair education and intelligence may enter upon the business of banking with a reasonable chance of future success, the goal of fortune at the outset of his career is just as far removed as it is in other branches of trade where goods and not money is the commodity.

The successful banker of to-day is the man who, as a youth, began at the bottom of the ladder, climbing to the top only by unceasing industry, scrupulous honesty, and a determination to do the thing in hand to the best of his ability. There is no room in the banking business for sluggards; to hold his place in the estimation of his employers the bank

clerk must first, last, and always, be rigorously honest, uniformly polite to all persons, and work, work, work.

The question of politeness may seem to the young man looking toward the banking business as an occupation to be quite a superfluous, if not, indeed, a wholly trivial matter. Next to absolute integrity I deem it of utmost importance. From my earliest days in the Chemical Bank I have been impressed with the value of courtesy. From my parents I learned the lesson of politeness, and I in turn have tried to impart my feelings in this respect to all those who have come under my direction in the bank.

Too often the man who wears a shabby coat is subjected to discourtesy, but I have observed that many a tattered garment hides a package of bonds or a big sum of money, and that gorgeous clothing does not always cover a millionaire. Many desirable customers have been driven away from a bank by the incivility of its employees. It is the invariable rule of the Chemical Bank that every employee, from the humblest clerk to the highest official, shall be courteous to every one. It is our assumption that a grain of politeness saves a ton of correction; no institution is too important or too independent to ignore the unwritten laws of courtesy.

The Mark of the True Gentleman

If I could command the speech of twenty nations I would preach politeness to them all. It is the Aladdin's lamp of success; it oils the wheels of commercial progress, and makes the burden of the day's work less irksome. I do not speak idly in praise of politeness, for out of the experience of fifty-six years in the banking business it has been borne in upon me almost daily that courtesy is one of the prime factors in the building up of every career. It is the hallmark of the Christian gentleman and the keen man of affairs. Politeness pays.

The banking business is really, in the finer sense of the term, a profession, and, like every other profession, is not to be learned without a deal of study, and years of patient,

thoughtful application. Whether a young man can reach the professional stage of banking or not depends wholly upon his personal qualifications, the extent of his ambition, and the persistency with which he devotes his talents to the work before him.

Of all the functions of a bank the handling of commercial paper is probably the most difficult to master. As a discount clerk I realized that the science of successful banking involved the study of men and human nature. Any man of intelligence can familiarize himself with the purely technical features of banking, but the notably successful banker is a man of culture, character, and strong intuitive powers. Nothing indicates so clearly the intellectual and moral stamina of a man than the attitude he assumes in affairs involving large sums of money.

The foundation of every great institution lies in the character of the man or men controlling it, and not in the material things which are behind it. The man who lives beyond his income, whose habits are extravagant, who seeks to "cut a dash" disproportionate to his resources, is the man whose paper is to be handled with extreme caution.

Finance is so intimately related to all human affairs that the trained banker knows precisely what course to pursue to avoid calamity, just as the physician knows what to prescribe for a given ailment, the lawyer what code best covers the case of his client. It is the possession of this knowledge of matters apparently foreign to business that ranks successful banking among the professions. The young man who aspires to a high place in finance can never hope to realize his ambition, therefore, if he is content with performing merely the mechanical details intrusted to him.

Of course there must always be "hewers of wood and drawers of water" in every pursuit, and banking is no exception to the rule. The majority of young men enter on their work in a bank with no thought above the daily routine to which they are assigned. To earn a fixed salary and remain in the same position all their lives is all that the average bank clerk asks or hopes for.

KNOW YOUR LIMITATIONS

Such men are not to be discouraged; they are the trustworthy servitors of an institution without whom the thousand and one details of a bank could not be looked after. Indeed, in most cases such men are to be commended for their self-repression and their recognition of the fact that they can never grasp the great and complex problems of finance. It is a wise man and a useful member of the business world who can measure his ambition by his capacity.

The young man who can become an intelligent machine should receive the consideration due him from those who control the great mechanism of which he is a small but important part. I know of many men filling minor berths in the banks of the country who are brilliantly able, and whose intellectual equipment is of a very superior kind, but who are philosophically resigned to the position which yields them the means wherewith they are enabled to sustain themselves and their families in comfortable circumstances. All cannot be leaders, and the conviction that work well done, no matter how unimportant it may seem to the worker, is a sound reason for self-satisfaction.

To sum up in a few words the essentials of success in the banking business, I would advise a young man who feels himself fitted for the work to learn economy, associate with those whose ideals of life are high and noble, to practice self-denial and observe the laws of health. He must be expert in the use of figures and as accurate as a chronometer. He should avoid evil associations in books and newspapers no less than in people. He should learn to face trouble unflinchingly. He should remember that knowledge is power, and that his ability to make money is in direct ratio with the extension of his intellectual horizon. Devoting his leisure to study, his time during the business hours of the day to the conscientious performance of his duties, living a clean, manly, honest life, no young man can fail utterly.

BUSINESS, TRADE, AND INDUSTRIES

The Railway President

By EDWARD PAYSON RIPLEY

[Edward P. Ripley, railroad president, was born at Dorchester, Mass., October 30, 1845. He was educated at the high school of his native place, and entered the railway service in 1869 as clerk in the Boston office of the Pennsylvania Railroad Co. His advance in the service of this company was steady, being made the New England agent in 1872, and the general eastern agent in 1878. In 1886 he entered the service of the Chicago, Burlington and Quincy Railroad as traffic manager, and in 1888 became general manager of the same. In 1890 he was made third vice-president of the Chicago, Milwaukee and St. Paul Railway, and in 1896 assumed the presidency of the Atchison, Topeka and Santa Fe Railway Co., which office he now holds.]

IF I were asked to say something about the making of a railroad man, I should ask, "What kind of a railroad man?" because the railroad profession embraces specialists of many kinds, and in these days nearly all railroad men must be specialists. A man who is an expert in machinery or in civil engineering may fill an important position in railroad service, even though he be ignorant of the work of other departments, and other men may hold equal or even higher rank in the service, though possessing little or no knowledge of engineering or mechanics.

Strictly speaking, it can hardly be said that the railroad service is a profession, but rather that it embraces all the professions. In a large system the head of a department must stand at the head of his class, but he is not required to be a proficient in other lines. The superintendent of motive power must be second to none in mechanical lines, but

he may know nothing of maintenance of way or of traffic affairs. Similarly, the traffic manager or general freight agent, though eminently satisfactory in his own field, may not know, and perhaps often does not know, the difference between a "mogul" engine and a "consolidation." All this is as it should be, and is a part of the evolution of the smaller railroad into the larger "system." The time has passed when immediate supervision of all departments can be vested in one man, except in the case of roads of very small mileage.

There was a time when the dry goods or grocery merchant bought his own goods (and largely sold them) himself, and knew every article in his store and the price of it. Now, if he has survived, he has divided his store into departments, and has a man at the head of each, and confines himself to a general oversight, judging his chief officers mainly by results, and interfering but little in details. There are yet a few small roads in the country where a somewhat intimate knowledge of the business of all departments is necessary to a few of the principal officers, and on these small roads is to be found the best school for general education in the railroad business. The great mass of railroad workers must specialize, however, in order to obtain employment or advancement.

It follows, then, that in most cases a "railroad man" is one familiar with but one branch of the service, having only such casual knowledge of the other branches as his daily association with those employed in them and the exercise of his powers of observation may give him. He may hope for promotion in his specialty, but not generally outside of it, though there are notable exceptions.

The Civil Service System

In our larger railway systems civil service rules are that a man who has made for himself a reputation on one road is invited to a position on another; but, generally speaking, this occurs only when it is believed that there is no one in the ranks capable of exactly filling the position. Necessa-

rily promotion comes slowly, and to many it does not come at all; but it may safely be stated that the qualities which lead to success in other fields will work the same result in this, and that brains, industry, and honesty will reap as large rewards in this as in any other branch of work. Doubtless there are deserving men of long years in the service to whom promotion and success come but in limited degree. Doubtless, also, there are some who only lack opportunity to develop talent; but the fact remains that it is not always easy, and not even always possible, to find just the right man for an important place.

The traffic department is purely commercial, and ordinarily requires but little technical knowledge of railroad operation. It is the selling department in distinction from the manufacturing, and requires the business acumen and general methods of a salesman in any other business.

The successful traffic man must have firmness, but must know when to yield, and must be just to his patrons and his competitors. It is his to develop existing business, and create that which has not existed. He must know a little of almost all mercantile values, mercantile methods, and the channels of trade. His place calls for no exact science, but for a large amount of general information, and a vast store of patience and pertinacity. As a rule, he is born rather than made, and generally, I think, it is harder to find just the right man for this place than for any other in the service.

DUTIES OF THE GENERAL MANAGER

The general manager upon most of our larger roads is not what his name implies, since he "manages" the operating department only, and has no jurisdiction over traffic or auditing officers. He is the recognized head of the operating department, including, generally, the mechanical and engineering branches. He may himself be a graduate of either, and is supposed to have at least knowledge enough of both, in addition to his own department, to know whether the work of each is well or ill done.

By far the larger number of the employees are under his jurisdiction, and, with the exception of the traffic manager, he comes more closely in touch with the public than any other official. He is expected to protect the company, yet to be just to the employees and to the public, and, having control of the major part of all payments, is expected, above all else, to study how they may be lessened without prejudice to the interests of the public or the railroad.

The duties of the auditor, treasurer, engineer, and superintendent of motive power are sufficiently explained by their titles.

Rewards for Faithful Service

It is stating the case moderately to say that the railroad business pays its employees quite as well as any other. Indeed there are few branches of industry that offer more or larger pecuniary rewards to those who are content to work, or are obliged to work, for fixed salaries. It has an interest which, with most of those who follow it, amounts to a sort of fascination, and few leave it voluntarily. A railroad man is partly born and partly made, but it seems to me that he is mostly born.

I am asked if promotions from clerical ranks to executive positions are not becoming less and less frequent in railway service. My answer is, No. On the contrary, civil service rules are becoming more universal, and favoritism and nepotism are lessening.

Another inquiry of some interest and importance which has been raised in connection with the subject under discussion is stated in about these words: "What would be your advice to the young man who came to you with the question, 'What line of railway service offers the best opportunities for success in the struggle for promotion from a humble position to that of railway president? In other words, what line of service offers, in your opinion, the least resistance as an avenue by which to gain the presidency of a railroad?'"

My advice would depend largely on the general appearance of the person asking the question. I do not know that there is *any* "line of least resistance." The rewards for success are about equal in all departments, but some who would succeed in one would fail in others.

A matter too often overlooked by those wishing to enter this field is that of physique. The railroad man must have a robust body in order to withstand the wear and tear and the hard knocks necessary to fight his way up in the railway service to a responsible official position. Unquestionably the railroad business, in all its departments, is more exacting in its requirements than most other pursuits. I would not advise a young man of delicate physique to enter the profession.

LIMITATIONS OF THE PRESIDENT'S POWERS

Particularly of late the impression seems to have gained ground that the present tendency of railroad operation is toward the concentration of greater power and of a large volume of detail in the hands of the president, giving less scope than formerly to subordinate officials. On the contrary, the president is much less a man of detail than formerly, and in a certain sense also much less a man of power. The head of a large concern finds it necessary to make rigid rules which even he may not transgress. He has more power in the sense that his field of action is larger, but the head of a smaller concern can give himself more latitude.

The question of enforcing temperance rules may be dismissed in a few words. The railroads have found it necessary to insist on temperate habits on the part of employees, and will not retain a man known to frequent saloons. Owing to the enforcement of this rule there is probably a higher average of temperate men among railway employees to-day than one or two decades ago.

It is but natural that every young man should be ambitious to win the good will and attention of his superiors, and is, therefore, anxious to know how this end may be specially

promoted. On this important point I would say with emphasis that a man who does good work need make no special effort to bring himself into notice, and any such effort is likely to be annoying to his superiors. The heads of departments know what each man is doing, and are better judges of his work than the employee himself. Ambition is good, but it should take the form of intelligent and faithful service, and events in their natural course will do the rest.

Much good advice might be offered on the subject of the personal life of the young railroad man. However, it is sufficient to say that, as a rule, officials gauge the employee by his work in the office, and pay no attention to what he does outside. But if he has been out all night, his appearance in the morning is likely to indicate his dissipation, and if his chief hears that his habits are bad, the effect on the employee's prospects is naturally unfavorable.

I have been asked if railroad men holding responsible positions are not now retired earlier in life than formerly. It seems to me that the tendency is to take care of and furnish light employment for men of advanced years and long employment, so far as this is possible. I do not think men are retired earlier, but it is customary to take on only young men.

The Problems of the President

Probably almost every reader of this article has, at some time or another, wondered what are the most important and vexatious problems with which a railroad president has to deal. This question opens up so vast a field that it is discouraging. The problems that come to the president are all-important, because they are of the class which subordinates do not settle. In other words, it is *only* the pressingly important things that get to him.

The railway business is peculiar in that it has been held to be "quasi public," which means that the president, in addition to being satisfactory to the board of directors of the railway company, must so conduct the affairs of the road

as to have them also satisfactory to the public, and to the representatives of the public in the various legislative bodies. As all history shows that no man ever did serve all the public to its satisfaction for any length of time, or was appreciated till after he was dead, it will be seen that the position is a difficult one.

It has long been customary to misrepresent the motives as well as the actions of those charged with the management of the railways of this country, and but little has been heard on the other side. I can conscientiously say, however, that a long experience causes me to believe that the moral tone of the railroad profession is quite as high as that of any other, and that portion of the public which deals with railroads most largely would, I believe, testify to the fact that transactions of great magnitude, which would require a written contract with bond attached if made with others, can be, and often are, accepted upon the word of a railroad official. The portion of the public which has dealings with the roads has unbounded confidence in the officials, while that portion which has not such personal contact, and is influenced by partisan and demagogic abuse, has none. It is this latter portion which makes itself heard and felt, and which at times makes life burdensome to the president and his staff.

To keep earnings up and expenses down, to satisfy the taxing power, the legislative power, the public, the employees, and the stockholder, summarize, in brief, the perplexities of the railway president's position. It is not possible freely to satisfy these conflicting interests, and the result is daily compromise, and not always on a basis fair to the corporation, or satisfactory to its representative, who assents under fear of worse things.

The General Manager

By JAMES THEODORE HARAHAN

[James Theodore Harahan, railroad man, was born at Lowell, Mass., in 1843. At the age of twenty-one he entered the railway service at Alexandria, Va., being employed by the Orange and Alexandria Railroad Co. In 1865 he changed to the employ of the Nashville and Decatur Railroad, at Nashville, Tenn., and from 1866 to 1870 was connected with the Louisville and Nashville Railroad, at various points. For the next two years he had charge of the Shelby Railroad, and in 1872 was appointed roadmaster of the Nashville and Decatur Railroad, which post he filled until made superintendent of the Memphis line of the Louisville and Nashville Railroad in 1879. In 1881 he was transferred to the New Orleans division of the same road. His services in various managerial capacities were rendered to this road until 1885, when he became general superintendent of the Pittsburg division of the Baltimore and Ohio road, which position he relinquished at the end of four months to become assistant general manager of the Louisville and Nashville Railroad. In October of the same year he was advanced to the general managership, which position he retained until 1888. From this date he has been successively assistant general manager of the Lake Shore and Michigan Southern Railway, the general manager of the Chesapeake and Ohio Railway, and general manager of the Louisille, New Orleans and Texas Railway. In November 1890 he became second vice-president of the Illinois Central Railway, in which post he is still engaged.]

THE men who will step into the higher executive positions of the railway service will have a different training from that of the veterans preceding them. To-day comparatively few of the superintendents, general superintendents, and general managers of railways have come from the technical schools. Their training has been practical, not theoretical, and their knowledge of the scientific principles governing the construction, maintenance, and operation of railroads has been gained by hard knocks. They know

that certain things must be done in a given manner to secure a certain result; but only a small proportion of them are able to go deep down to the scientific basis of the problem and give a clear analysis of the whys and wherefores of the question. It is in this respect that I see the signs of a decided change in the processes which go into "the making of a railroad man."

The time will never come when a man will be able to stand in a high position in the operating branch of a railway and discharge the duties of such a position in a manner to deserve the praise signified in the phrase "a good railroad man" without having a clear, practical, and first-hand knowledge of the details of railroad work, from its fundamentals to its most complicated processes. He must be practical at every step, and that implies that he must work up from the bottom and himself take the steps in which he is to direct others. From the standpoint of the railway executive nothing can take the place of experience. Of that we may rest assured. The general manager who does not know the actual process of so seemingly small a matter as tamping a tie is likely sooner or later to make himself ridiculous in the eyes of the section hand or the boss of the construction gang.

On the other hand there is nothing so practical as real science, which goes down into principles and causes. The whole tendency of the present is to master fundamental principles, to learn why and how certain causes produce certain results. It is no longer sufficient for the executive man engaged in railway work, more than in any other line of human effort, to know that doing something in a given manner will give a desired effect. He must be master of the principles of the operation or he is liable to serious mistakes and is handicapped at every turn.

Technical Training Essential

Therefore, in my opinion, the men who are to be the future executives of the operating—as distinguished from the

financial—branch of railroading, will stand on the foundation of a thorough scientific or technical training. And they will be the more practical for that kind of schooling, provided that they do not attempt to jump over the hard, practical details of what may seem to them the humble and possibly vulgar parts of railroading.

If I were hard pushed for a definite statement of my ideas of the steps a young man should take to become the general manager of a railroad I should certainly reply by going a little into the field of personality. I take it that a man will carefully consider anything which vitally relates to so important a matter as the life career of his own son; and it happens that I have a son whom I hope to see in the position of general manager of a railroad. This circumstance brought home to me, in the most serious and personal manner possible, the question just proposed, and I answered it by sending the young man, after he had obtained a good general education, to a first-class technical school. When he was graduated from this institution he was well grounded in the theory of mechanical and civil engineering. Of course it might have seemed pleasanter to him to have at once stepped into a position of some little dignity and responsibility. But a genuine railroad man is not made by high jumps, particularly at the beginning of his career. He joined a surveying party in the humblest capacity and "carried chain" for many months. When fitted by experience for his first promotion he was given a transit and the other surveying instruments, and took a more responsible part in laying out a new line of railroad. Before this experience was over he knew something about how the roadbed of a railway is planned and constructed.

Then, for the sake of broadening his experience, he was transferred to the shops. There he put on a mechanic's apron, was assigned a lathe and bench, and gradually learned, by hard and honest labor, the practical side of locomotive and car construction. All this time he was being brought into constant contact with the working force of the road—the surveyors, the navvies of the gravel train, the

bridge builders, the section hands, the conductors, engineers and firemen, the machinists and the mechanics in every department of car and locomotive building. With many of these he naturally and inevitably established associations of fellowship which gave him a close insight into their lives and enabled him to see the problem from their viewpoint. After a protracted experience in the shops he was offered a position as roadmaster in the service of an Eastern line. Here was his opportunity to bring into play a new faculty—that of getting others to do things, and to do them in accordance with his ideas as expressed in orders and suggestions. He won the confidence and approval of his employers in his first executive position. I knew that he was well grounded in the technical knowledge of his calling, that he had seasoned this theoretical knowledge by practical experience and hard work in the fundamental lines of the business, and I hired him as a division superintendent, as I would have hired any other young man of whom I knew the same things. This statement will, at least to a degree, answer the question of how I would start a young man on the road to become a general manager.

Probably a very large proportion of the men to-day holding positions as general managers of railroads will be compelled to share with me a regret that circumstances did not permit them to lay the basis of a sound technical education before entering the sterner school of experience in the actual service. Certainly I have felt such a regret very forcibly; my own training was wholly and severely practical, and in that particular is probably not different from the experience of most men holding similar positions.

Duty Under Dangers

The beginning of the Civil War found me in a very humble position in a freight office. I enlisted in the ranks for three years, and when that term was over I entered the government railway service in Virginia. In those days the ordinary life of a railroad man was exposed to ten perils

where it is to-day threatened by one, but the operating of trains in a country infested by Mosby's famous guerrillas was many times more hazardous than that of railroading in times of peace.

A portion of the time I was in charge of the yards on the old Orange and Alexandria line, but was frequently called upon to perform the duties of an engineer in taking out trains loaded with government supplies. It was a hard but effective seasoning in the development of what may be called railroad courage, for every time I pulled the throttle in those days I faced the likelihood that I should be tumbled with my engine into the ditch and shot by Mosby's guerrillas—if, indeed, I failed to be instantly killed in the overthrow. Time and again, with my fireman, I was compelled to lie down in the bottom of the cab or the tender to escape the shower of bullets which pattered against the train.

Then those fellows had a way of doing things at the last moment in a manner which upset all precautions and made it almost impossible to change the programme to meet emergencies. One particularly exasperating practice to which they resorted was that of drawing the spikes and bolts from a rail so that it was entirely free, but still leaving it in place. In the bolt holes at each end they would fasten telegraph wires running back to their ambush in the woods beside the road. From the cab window it was impossible to discern the fact that the track had been tampered with, and just a moment before the drivers were on the loose rail the latter would suddenly and mysteriously move out to one side and the train be hopelessly ditched, while rifle balls from the guns of an unseen foe spattered about the wreck. Operating trains in the face of perils of this kind could not fail to give me a keen and lasting sympathy with the engineer who feels that there is danger ahead and does not like to take desperate chances. At the same time those experiences bring forcibly to me the fact that railroading, with all the modern safeguards by which the running of trains is governed, is far safer than it was even twenty years ago, and that, in fact, it is not more perilous than many other vocations

not thought to be especially dangerous. This observation is fully substantiated by reliable statistics. The young man who hesitates to go into the railway service because of its peculiar danger is not well informed on the subject.

Arguments which he can substantiate by reference to his own experience are those which come most naturally to a man whose duties are wholly practical and unargumentative, as are those of a railway manager. In laying down the principle that the young railroad man who is determined to push his way into an executive position of importance must improve every opportunity to broaden his knowledge of details and never count the cost to his own inconvenience, I may be pardoned for emphasizing the point by reference to my promotion to a position of that character.

How Promotion Comes

I was then roadmaster of a certain road, and in that capacity had, of course, nothing whatever to do with the traffic of the line in an official sense—the duties of a roadmaster being confined to the care of the roadbed and tracks.

As I was constantly traveling over the line I met many of its patrons in the various towns and cities. These told me their grievances against the road, and nearly all of the complaints related to the traffic department. On these trips I often came in contact with the head officer of the entire system, and we spent many hours discussing the affairs of the line. In these conversations he learned that I had picked up considerable information regarding traffic matters. The fact that I had voluntarily gone out of the way to learn something I was not obliged to know in order to retain my position, or even to discharge its duties, impressed him more than I knew at the time.

In the course of events I was one day greatly surprised to receive from the general offices of the company a telegram asking me if I would accept the position of general manager of the line. Later I learned that the one particular thing in my work which had attracted the attention of the chief offi-

cials of the company, and turned the tables in my favor, was the fact that I had gone outside the routine of my duties to serve the interests of the road in a broad way. I have no doubt that scores of other railway officials have had similar experiences and have won promotion in a like manner.

It is to be taken for granted that no man will be advanced to a responsible and important railway position without displaying in reasonable measure that capacity for practical affairs commonly called executive ability; but there are special qualities which seem to me very essential for this service. The man who does not possess them has not in him the making of a good railroad man.

Fair Play to All

The first of these endowments is a natural and inherent tendency to do full justice to the humblest as well as most influential person with whom, as an official, he is brought into relationship. He should have the courage to dig to the bottom of every problem, complaint, or contention, and, having determined in his own mind the right or the wrong of the matter, nothing should deter him from making a settlement on the lines of exact justice. In no other way can the general manager of a railroad build up a proper spirit among the men under him. If he cannot inspire in his men of all ranks the knowledge that they will be treated fairly and squarely in every matter that comes to his attention he should set himself down as a failure. And the fact that all who work under his supervision know that he is ready to treat them with justice will act as a safeguard to the interests of the company, for the reason that any man who suffers arbitrary or unfair treatment at the hands of another, even from one directly over him, will promptly appeal his case to the general manager in whose fair dealing he has confidence. And, on the other hand, the minor officials will, under these conditions, take good care to treat their men rightly, knowing that a fireman with a just cause has a better show with the general management than a division superintendent with a weak case. It is simply the wisdom of right.

It may be urged that this disposition to mete out justice without regard to rank is essential to the manager of any business. So it is; but it applies particularly to railroad affairs, for the reason that the service is complex and includes men of widely varied classes. The man in greasy overalls naturally feels a very strong reluctance to "go over the carpet" and face the trainmaster, roadmaster, or division superintendent with a contention which may be very disagreeable to any of these men in authority over him. And he will not voluntarily take such a step unless he is sure of his ground and knows that he will be sustained if he is in the right, and also that he will be protected from annoyance, persecution, or hardship as a consequence of having carried his cause to the higher court of appeal.

That he should have this feeling is most important. The nature of the railroad business is such that the humblest man concerned in the operating of trains is in too responsible a position to be ignored by any official, and he is entitled to a fair and respectful hearing at the hands of any superior and at any time. His complaint may bring to the knowledge of the management some vital weakness in the administrative system which may prove of the utmost importance.

Clear-headedness and Decision

Decision is another imperative quality for the higher positions of the railroad service. A very large proportion of the matters brought to the attention of the general manager of a railroad must be disposed of almost instantly. This is especially true of the problems which arise in the operating branch of the service. There the incentive to "beat time" is ever present.

The spirit of railroading is expressed in one word: Rush. Broadly speaking, its affairs must move swiftly and admit of no delay. There is seldom time for a general manager to deliberate over a decision, and if he lacks the capacity to arrive habitually at prompt decisions he is out of touch with the spirit of his surroundings, and liable to fatal error by reason of his weakness.

The ability to judge of human nature with fair accuracy is another important qualification with which the successful railway official must be endowed. Perhaps more frequently in this than in any other business the executive is forced to determine his course in matters of great moment by his impression of the man whom he is to intrust with responsibility.

In attempting to gain an insight into railroad work it is necessary always to hold in mind the fact that the safety of the public is dependent at a hundred points on the reliability and judgment of men in humble positions. The section hand who spikes the rails, the switchers, the operators at lonesome and inconsequential "jerkwater" stations, and the whole rank and file of yardmen, trainmen, and operators hold in their hands, every hour they are on duty, the safety of thousands of travelers.

In spite of the fact that an elaborate operating system has been devised and hundreds of so-called automatic safeguards have been adopted, to the end of making the operation of trains as nearly automatic as possible, it is still true that only the unremitting exercise of what may be termed good railroad judgment has succeeded in reducing the number of railroad accidents to the remarkable minimum now attained. And by whom is this railroad judgment exercised to the constant prevention of accidents and calamities? Mainly by men in greasy overalls. Only a few of them, comparatively speaking, can indulge the luxury of "store clothes" while about their work. In most businesses the employer does not feel that he must select his "hands," or laborers, with a special view to their native judgment, decision, and resourcefulness in times of emergency, knowing that a lack of these qualities on the part of a very humble servant is not likely to result in the injury or death of many persons. But this likelihood must be considered in employing almost every man on the pay roll of the operating department of a railroad. For this reason a shrewd and ready judgment of human nature is a cardinal requisite in any man holding a position of authority in the railway service. He must be able to "size up" a man and make no mistake about it—otherwise the selection

of a switchman or some other fellow of humble rank is likely to cost the road serious disaster. There is not a day in which the general manager is not called upon to exercise this faculty, but mainly in the choice and management of men in positions of higher rank. In fact, he comes to feel it the main part of the business, and every problem seems to resolve itself into the question: "Have I made a mistake in this man?" There is only one kind of advice to be given on this point. Form your judgments carefully, keep close watch of your men, and always stand by those selections which have been justified by observation and experience.

When in the service of another railroad I had a subordinate official who had many and peculiar obstacles to contend with in his department. I was fully satisfied that he was doing all in the power of any human being, under the circumstances. But my superior did not agree with me. He said the man's department was not producing what it should, and repeatedly suggested that a change should be made. I pointed out the probability that a new man would do worse, and finally told my superior that I would discharge the man only on a direct and written order which would take the matter wholly out of my hands. In short, I refused to nullify my judgment of the official in question. He had my confidence, and I declined to make my acts say that he did not. Not long after this I was given a better position in the employ of another road, and one of my first acts was to offer the man who had been such a bone of contention the same position with the company to which I had just gone that he had held in the one I had left. What was the result? The man scored a splendid success, showing clearly that insurmountable conditions and not his lack of ability had before been responsible for the unsatisfactory showing of his department. Few incidents in my experience have interested me more than this, for it involved a most vital and interesting study—the test of the estimate I had placed on the ability of a man to perform well a certain line of railway work.

The most condensed schedule of the main qualifications which are demanded of the general manager of a railroad

would be manifestly inadequate without reference to the knack of turning quickly and completely from one subject to another of radically different character. All the energies of his mind must be switched absolutely and instantly from one field of railway activity to another, and the range of this field is very great.

One moment he is engaged in estimating the productive resources of a certain locality, with a view to expending many thousands of dollars in extending the line into that region or altering the service already in operation there. He weighs the effect this must have on other cities and districts and on the earning capacity of the road. As the men interested in this problem pass out of his door an inventor is ushered in. He presents a new appliance which may be of the greatest possible value to the road. More likely, however, it is worthless and impracticable; but the possibility that it is the thing for which the railroad world has long been looking makes it necessary to give it serious consideration.

Possibly the line of demarcation between the practical and impracticable is obscure, and the decision upon its merits involves many complicated considerations. The general manager must then call into action of the most intense kind a wholly different set of faculties, so to speak, from those employed the moment before in figuring on the proposed extension of the road.

A few moments later the general superintendent comes in with a labor problem on his hands, and once more there is a complete shift of the whole mental machinery. He is followed by the other members of the general manager's cabinet: the chief engineer, the traffic manager, and the superintendent of machinery. And so it goes, from one extreme to another, and the general manager who cannot keep pace with this ceaseless and radical change of problems does not come up to the demands of his position. If his heart is not wholly in his work, and if he is not gifted with that rare talent for practical affairs generally termed executive ability, he will find the work killing. His safety, even if he has a generous share of this gift, is in the ability to shut off work

as quickly and as effectively as the locomotive engineer shuts off his steam.

The general manager who takes his work home with him and carries his problems to his chamber cannot last long. The strain is bound to be too intense and the opportunity for recuperation too small to keep the pace going. One of the most vital and imperative rules of a general manager's life, therefore, should be to leave his work at his office.

BUSINESS, TRADE, AND INDUSTRIES

The Passenger Agent

By CHARLES S. LEE

[Charles S. Lee, railway man, was born at Washington, D. C., August, 13, 1855. In 1871 he entered the railway service with the Lake Shore and Tuscarawas Valley Railway Co., at Cleveland, Ohio, and retained this connection until 1879. In August of that year he became rate and advertising clerk of the passenger department at Cleveland of the Bee Line Route, holding this post until July 1, 1883, when he was made secretary of the American Railway Publishing Co., New York City. From February 1, 1884, to May 1, 1888, he was chief clerk of the general passenger department at Denver, Colorado, of the Denver and Rio Grande Railway, after which date and until September 1, 1893, he was general passenger agent of the Colorado Midland Railway, part of the latter period having charge of both passenger and freight departments. From September 1893 he has held the position of general passenger agent of the Lehigh Valley Railroad.]

MOST persons think that about the easiest job to secure is a railroad clerkship. If a man can't do anything else successfully in the world he turns to a railroad office. If a father or a guardian has a boy who has made a failure, even of a commercial college, he tries to fix the youth in a railroad department. But all these people are very far from right. One of the hardest places I know of to get a start in is a railroad office. I shall tell you about that in detail, later. A large number of railroad clerks are the sons or relatives of railroad men, and they usually seek the department toward which their bents of mind lead them. Some young men are mechanical in tastes, some have tendencies toward electrical work, some want to be bookkeepers, and others are active, restless, hustling, ambitious—ready to take a try at the biggest, liveliest kind of business in the world.

There is a place for them all in the railroad office. It is so varied in its work and so broad in its field that it has room for almost every kind of a man imaginable except the average man who knocks at its door for a job.

There is no room in a railroad office, however, for a shirk, an incompetent, the man who works for money, or the man who counts his hours. Such a man may find foothold, and frequently does, but he seldom retains it. I know of few places where a man will find his level quicker than in a railroad office. Of late years the growth of the business has been so enormous that it has led to specialization among its employees. The field covers so much territory that one man cannot get over it all, as used to be the case; so he only takes a part of it.

Specialization exists as much among clerks as other classes of railroad men, such as brakemen, firemen, and telegraphers. The mechanical man naturally gets work in the department of the superintendent of motive power. Here he studies engines and their manufacture, cars and coaches, rails and switches. He figures on the "strength of materials," and studies to avoid the "perversity of inanimate things." He learns all about the hauling power of a certain quantity of coal and a given amount of steam over known grades with a specified weight in cars and contents. That involves a practical knowledge of mechanics.

When it comes to the adoption or rejection of new devices in machinery it is the trained clerk in the department who does the figuring for the chief of that branch. On our road we have had men begin in the shops as apprentices to fit themselves for these clerkships.

Departmental Work

The man with a liking for electricity generally goes into the transportation department or the office of the superintendent of telegraphy. In one he has practical experience with the key and sounder, and in the other he deals with the higher branches of the science, construction and maintenance

of lines, new methods of transmission of light, heat, and power. In the office of the superintendent of the road the clerk attends to the details of the movement of trains, among other things. The present appliances for block signaling require sufficient study to make that branch of work a special training in itself.

In the general passenger agent's department there are several divisions. The rate department looks after the division of business between the road and its auxiliaries. The ticket department attends to the issuing, handling, or charging up of the tickets. Then there is the advertising department, which places the advantages of travel over the line attractively before the public; and, besides this, there are the soliciting department, which is engineered from the main office but is conducted chiefly in the field, and the baggage department, which attends to the handling and tracing of baggage.

More clerks are employed in the accounting department than in any other division. Here the railroad bookkeeping is done. The comptroller has a large clerical staff to check up the accounts from all the other departments, and the treasurer has a corps of aids equally numerous, who receive, pay out, and keep track of the money that comes in.

The freight department employs a great army of clerks, and is organized on the same general lines as the passenger and other departments. The station agent at small places is often the passenger, freight, operating, and dispatching clerk, combined in one man, jointly paid and severally controlled by these departments. Such a man is accountable to almost every officer of the road, but, naturally enough, when it is possible to concentrate so much responsibility in one man, the work is not hard and the duties are largely routine. In all the larger cities the departments have their own representatives working under the immediate supervision of the division heads. Take Buffalo, for example, where I have a division passenger agent and a local passenger agent. There are division and local freight agents, a local dispatcher, trainmaster, stationmaster, and so on.

PAY AND PROMOTION

So much for the specialization. Now let me say a word about the routine of office work, the grades of pay, and the chances for promotion. All offices depend almost wholly upon their clerks. Of course the head of the department is responsible. Directly under the head of the department comes the assistant, or if there is no such officer, the chief clerk. All matters of office work pass through his hands before going to the head. He is the clearing house association for the other office divisions. Take the passenger department for a general illustration. I have a chief clerk who is, under me, the head of my office. To him come the reports of the heads of the rate and ticket bureaus. The general advertising agent and the general baggage agent report direct to me. All other reports reach me through the chief clerk. I do not mean that I am only to be reached through the chief clerk. I refer to the routine office business, that necessary drudgery that makes up so large a part of every railroad man's life. The clerks are all graded, and each grade receives pay according to the value of its services.

The pay of clerks varies according to the road and the city that the clerk works in. Larger salaries are paid in New York, as a rule, than anywhere else, but there are a dozen applicants for each vacancy where there is one in any other town. The expenses of living are greater in the metropolis. Messenger boys get from $15 a month up to $25. Clerks get from $40 to $100 a month. Chief clerks receive all the way from $100 to $250. I know of one chief clerk in New York who holds a unique position in railroad circles, and I have been told that he gets $10,000 a year, but he is the exception, and the only exception I know of. Station agents get from $25 to $250. That is about the range throughout the country, New York included. Pay is about twenty per cent higher in New York than in Philadelphia, and about twenty-five per cent more than in interior

towns. The hours of work are the same as in other lines of business.

Promotion for a railroad clerk depends more on the man than anything else. In most offices civil service rules obtain. In my own department I never go outside the office to fill a vacancy, if I can help it. If I am forced to, I try the other offices of the road, and, if they cannot supply the man I want, I look around for one who has had railroad experience. Possibly his name may be on my waiting list. Perhaps he may be suggested to me by one of my men and he may be working elsewhere. In that case I write to his employer, telling him what I am willing to pay for his services and asking whether he objects to my offering the place to him. If he does not object, I make my offer. If this fails I sometimes advertise for a man. I did that not long ago and received a bushel of letters. Some were written on paper from the Holland House and Waldorf-Astoria. Two or three reputable clubs furnished applicants, but the man who got the job came from the Mills Hotel, where the living expenses are less than three dollars a week. If I fill a vacancy by promotion or create a new place, I recruit my office staff by hiring a new office boy and make promotions all along the line wherever it is practicable.

Requisites for Success

Many clerks never advance much above their original positions. They are the kind of men who work in railroad offices merely to draw their pay. They would work as readily in any commercial office. They have no love for their business, no ambition, and yet they wonder why new men are promoted over their heads, and lay it to prejudice, injustice, and discrimination. I know some clerks who figure this way:—

"I've got to be down at the office at nine. I go to lunch at twelve. I get back at one and leave at five. Between hours I can probably get out in the hall for half an hour to read the paper and smoke a cigarette."

And yet this is the very man who will sit down in the evening over a smoke and tell you how the railroad business ought to be run; give you some ideas of his own that ignorance on the part of the chief clerk or head of the department has prevented from being adopted, and will inform you seriously that he has been kept down by jealousy from drawing twice as much pay as he gets.

There are certain essentials that all clerks must possess if they wish to hold their jobs for any length of time. But many men overrate these necessary things. For instance, a clerk must be accurate in his figures, grammatical in his expressions, neat and plain in his handwriting, and respectful to his superiors. He must obey orders and do the work that is set before him. These are as requisite as the wearing of clothes, but no more so. I know some men who have been clerks for twenty years. They have had all these essentials and have them still. Their manners are perfection, their obedience is beautiful, their handwriting copperplate, and their neatness like unto a Holland housewife's; but they are clerks to-day, even as they were when they began. Their trouble was that they stopped at the essentials, which are only the beginning of a man's career.

The clerk who advances is one who works for his office, his chief, his road, as well as for himself. He studies the work of the man directly in his own way of promotion. He not only does all that he is called on to do, but finds tasks that are outside the routine of his desk. He makes suggestions. He has ideas. He doesn't find ideas by dreaming, gossiping, or talking with other clerks when he ought to be at his work, but by studying and by close observation. There is not a clerical place that I know of that does not offer an ambitious, studious, observant man an opportunity for impressing himself so strongly on the management that promotion must come to him. Sometimes it may be slow in his own office, but if he is alert and wide-awake, he can find his chance in some other office. There have been cases in railroads following strict civil service rules when capable men have been kept back for years until vacancies in higher

positions have occurred. But these men could easily have found better pay on other roads had they cared to make the change.

The interests of a railroad are so vast and varied that almost any practical suggestion finds a place in some department. A clerk in the cashier's office may have an idea for increasing speed on engines, a man in the motive power department may devise a new plan of soliciting passenger business, a man in my office may work out a plan for simplifying the keeping of freight accounts. There is room for all these ideas, and the man who makes them is the man who rises, and, if he does not neglect the essentials of his daily work while figuring out these problems, he cannot be kept down.

Most men imagine, if they give the matter any thought at all, that a railroad clerk is hired solely to take care of the line of work he is set to do. If that were the case there would be no such thing as promotion. A man would have to begin as general superintendent, general freight agent, and superintendent of motive power. But this is not the case. All of these higher places are filled by promotion. There is not a general officer of a railroad in this country who has not served some sort of an apprenticeship in the service.

PUSHING BUSINESS

Railroads are run, primarily, to make money. To make money the public must be served fairly and honestly and as generously as circumstances permit. Railroads cannot exist without business, and the two sources of business are passenger and freight traffic. This business must be solicited in a large measure. The clerk who plans successfully to aid this canvass may make himself an important factor in the management of the road. Let me give you an illustration of the kind of work that is useful in the passenger service. Not long ago the Lehigh Valley Railroad Company sent to its passenger and ticket agents throughout the country a circular concerning the proper reading of newspapers for business. In substance it was as follows:—

"Watch the local columns of the newspapers. When you see items like these:—

"'Mr. and Mrs. Smith, of San Francisco, are visiting the Browns on Riverside Drive.'

"'Mr. Wilson, who has been very ill with pneumonia, is convalescent.'

"'The marriage of Mr. Miller and Miss Brown on the twenty-fifth promises to be one of the social events of the season.'

"I want you to clip these articles or to take note of them, and at the first opportunity call upon Mr. and Mrs. Smith and explain to them the merits of this line on the return trip to their home; they will in nearly every instance be glad of the information, and appreciate your courtesy and enterprise, with the result that business will be secured.

"Before calling upon Mr. Wilson you could ascertain, probably without much trouble, just what place and climate would be most suitable for his convalescence, as it would be folly to urge him to take a long-distance trip when he could not afford to go beyond one hundred miles. By studying customers in this way business is increased. Those who travel for pleasure or for health are generally glad to be advised and helped in this way, and it is wise policy to do so.

"In the case of the bride and groom—this is the one period in life, of all others, when cost is not counted, so that you may feel secure in suggesting all the luxuries as well as comforts obtainable if the wedding journey is made over our road.

"These points seem small in themselves, but if once tried you will be astonished at the results obtained."

This will give you an idea of the chance for advancement in a railroad office for a quick-witted, industrious man, who has ambitions and ideas that extend beyond the walls of his own particular office. The railroad business is essentially one in which ideas count, and practical suggestions turn quickly into money. My advice to clerks is to use their brains as well as their hands, study the road and its interests, avoid

office politics, and be loyal to the head of the department. The chief trusts his employees. He has to do so. If he did not he could not do business. Their confidence must be reciprocal if good results are to follow. The clerk who is sure to go up must do his own work as well as it can possibly be done, and at the same time be prepared to do the work of the man who is a step higher up. He must get right down to "brass tacks." He must have a purpose in his work. He must not count hours. The day should be too short for him—not too long. Not long ago an applicant for a stenographer's place called on me. After he had told me his name and experience he said:—

"What are the hours?"

"I guess I don't want you at all," was my answer.

Another thing to be remembered is the cultivation of tact, patience, and affability. A clerk should treat every one courteously, from the president down to the office boy. He should also always be polite to visitors. No matter who the caller may be, or how foolish his inquiry, the clerk should answer it fully, satisfactorily, and politely. Then again, let me advise all clerks not to imagine that they know it all. I began as an office boy in a railroad office in Cleveland twenty-nine years ago. I have served as clerk in passenger and freight departments, in the accounting and treasurer's offices, under the general officers and the superintendent, and I know whereof I write. Don't know it all. You can't do it. I learn things every day, and so does every other railroad official who studies his calling conscientiously.

As to habits. The same rules obtain as in all other lines of work. The man who cannot control himself can never control others. A drinking man, a gambler, and a man who does not know how to take care of his money and is always in debt is sure to fail.

The Advantages of Experience and Education

This brings me up to the chances for entering a railroad office as a clerk. It is difficult, unless an applicant is recom-

mended by some one the head of the department knows, or has some peculiar fitness for the work. The best advice I can give is to be on hand when a vacancy occurs. Every officer in New York City is loaded up with applications for clerkships. Every office is overrun with applicants who call in person to present their claims for employment. And there are five hundred applications for every vacancy. A man of twenty-five or thereabouts, with no experience in railroading, might walk the streets of New York until he wore his boot soles through looking for a job and not find it. If, on the other hand, he has had experience in some other town and can bring acceptable references he might secure work without trouble. It all depends upon circumstances. Sometimes clerks are taken from brakemen, firemen, conductors, and mechanics, if the men have sufficient education and adaptability. Of course the better education a man has the better off he is. A college man stands a better chance than a common school graduate, everything else considered. The man who has been through a college of technical training, such as Sheffield, Stevens, Troy, or Pratt, and understands mechanics has fitted himself for one kind of railroad work to begin with. A thorough knowledge of telegraphy, stenography, or typewriting is useful and may aid a man in getting a place. The man who is neat in his appearance and gentlemanly in his address is more favorably received than the sloven or the boor. I have known clerks to ruin their future altogether by inattention to their dress and by impatience and gruffness in manner.

I cannot tell you precisely what kind of a man can find an opening, because that depends so largely upon circumstances over which the head of an office has no control, but I will tell you about one man who got his chance through me several years ago. It will serve as an illustration.

"I am twenty-two years old," he said. "I have been through college and I want to be a railroad man. I can work at almost anything. I am willing to work from morning until midnight until I have finished my task. I don't care what you pay me or what you set me to do. All I

want is a chance, and if I can't do the work satisfactorily you can let me go. I am ready to begin to-day."

Now I did not have anything in my office, but I went into every department and I said to the heads: "Do you want an A No. 1 man, who is willing to do anything and do it well? If you do, I've got a man for you."

There was no vacancy then, but the next week that young man began work.

BUSINESS, TRADE, AND INDUSTRIES

The Locomotive Engineer

By WILLIAM J. McQUEEN

[William J. McQueen, engineer and master mechanic, was born at Cold Springs, N. Y., June 17, 1855. As a child he removed with his family to Schenectady, N. Y., where he attended school until fourteen. Reading has always been attractive to him, and education, especially of a practical nature, has been wrested from the conditions of his active occupations. He began his railroad career at seventeen as fireman on the Boston and Albany line, transferring his services the next year to the Hudson division of the New York Central Railway. After three years he became an engineer, first in the freight service and up through the various grades to engineer of the "Lake Shore Limited" and the "Fast Mail" until March 1902, when he was appointed master mechanic of the Hudson, Harlem, and Putnam divisions of the New York Central.]

THIS is a particularly favorable time for entering the railroad service in this country. Most of the through and even the local lines have been handling an unusual amount of traffic, and, as a result, work is plenty, pay is good, and the demand for experienced and reliable men has never been greater. Then, again, the rewards for persevering industry are increasing year by year as the number of employees grows and their duties become more onerous. Nowadays the railroad fireman and engineer are more than mere workmen. They are intelligent, studious operators in a vast and ever-growing field of industry. The engineer of the present is better educated, as a rule, than his predecessor, is possessed of far more technical knowledge, and is better paid accordingly.

The engineer of the future must make still farther advancement. New devices for saving labor and expense, and inventions for increasing speed are constantly coming into use. These require the services of firemen and engineers who are thoroughly up to date. To do this work the future engineer must possess more technical knowledge than that of the engineer of the past. He must understand the principles of mechanical engineering to rise to the foremost rank in his calling. And it is for those who are ambitious to excel that this article is written. In addition to these improvements a possible change of motive power from steam to some other force may at any time revolutionize the business of the railroad world. When this change occurs, if ever, only the most studious, intelligent, and proficient men will be able to hold their places.

Any young man with a common school education, good health and habits, intelligence, industry, and ambition may become a locomotive engineer, provided he is willing to faithfully serve his apprenticeship. An experienced man often earns as much as $2,000 a year, and, as a rule, he works only half the week. This gives him an abundance of time for study, rest, and social enjoyment. His income is decidedly larger than many professional men receive, his working hours are half as long, and his place is his for life, unless he deliberately throws his chances away or is the victim of some unavoidable circumstance. Not only is his future secure in his own vocation, but the higher branches of the service are open to him, provided he fits himself to fill them. There are many engineers who have become master mechanics, division superintendents, superintendents of motive power, and some have gone even higher. Angus Sinclair, the author and editor, acquired the foundation of his ripe knowledge while working as fireman, engineer, and master mechanic. There he received the practical training which, coupled with his theoretical knowledge, has made him a world-famed authority in his special lines. Promotion depends almost wholly upon the man. Study, thorough and constant care for the interest and welfare of the road

and its patrons, industry and intelligent self-reliance are the keynotes of success.

How to Begin

The usual way to become an engineer is to secure employment as a fireman. This is done by filling out an application blank furnished by the division superintendent of motive power. There are few shrewder judges of men than the officers who pass upon applicants for places in the operating branches of railroads. This is necessarily the case. The lives of hundreds of passengers and scores of train hands are at the mercy of the humblest employee of this service. Most of the men perform their tasks without direct supervision. Upon their fidelity, intelligence, and experience the safety of the road depends. No stronger illustration can be given of the care with which beginners are chosen than the fact that less than ten per cent of the men who enter the service as firemen fail to become engineers.

The chance of securing work rests largely upon the first impression made by the applicant. If a young man is clean in person and neat in dress, is physically sound, writes a plain hand, shows evidences of a fair education, and if his references are acceptable, he is generally put upon the waiting list. There have been times when a young man has had to wait for months, and even a year, after going on the waiting list before he has been put to work, but, owing to the present activity in railroad circles, the successful applicant to-day seldom waits longer than three months, and oftentimes he is successful in obtaining employment within a few weeks.

The first work of a new fireman is usually on a switch engine. Sometimes he is so fortunate as to be taken at once into the through freight service. That was my experience. If he enters in the latter capacity he generally serves on the extra list, filling the places of men who are temporarily absent until he is assigned to a regular engine. Now the young man has his chance. His advancement depends solely upon the use he will make of it. He serves directly

under the tuition of the engineer. He learns to keep his engine clean and his fire in good condition. These apparently simple tasks are not to be learned in a month or a year. To perform them well requires a vast amount of patient industry. Then he must watch his coal. Fuel is one of the chief items of expense in the operating service. An economical fireman is often able to save his pay each month to the company. For instance, the New York Central system runs about 1,600 engines a day. On the round trip to Albany from New York, about 300 miles, a passenger train averaging eight cars should use between seven and eight tons of coal, considering weather conditions. This consumption might easily be increased by careless firing.

A fireman's pay is better than that given to beginners in most walks of labor. Switch engine firemen average $57 the month, through freight firemen get $75, and in the passenger service the pay runs up to $90 on the best roads.

Hard Work

Right here let me say a word to young men starting in as firemen. It is hard work at first, and only young men who have been accustomed to manual labor are fitted, as a rule, to take the places. To many of these beginners $50 seems a fortune and the tendency to spend it the first week is strong. Some new firemen, never having had so much money at one time before, live in luxury the first two weeks and run in debt the last two. At the beginning of a man's railroad career he should commence to save a part of his monthly wages. This rule should be followed all through the service. In no other way can he secure an independence or enjoy the comforts of home to their fullest extent.

Before taking up the engineer's side of the making of a railroad man, let me write a few lines regarding my own career. It may be of value to those who intend making railroad engineering their vocation. I was born in Cold Springs, New York, in 1855. My stepfather was one of the

pioneer engineers on the old Albany and Schenectady road, and was with the road fifty-two years. Naturally I was ambitious to follow in his footsteps and by his advice I applied to the company for a place. I was made a fireman in the freight service when I was eighteen years of age. I believe the limit of age has now been fixed by law at twenty-one years. That was in 1873, therefore I have been in the employ of the New York Central Railroad for twenty-seven years. In all this period I have not been suspended one day and have only twice been forced to disconnect my engine because of a breakdown or failure of the machinery. When I was twenty-two years old I became a full-fledged engineer in the freight service. In 1888 I was promoted to the passenger service. I run the "Fast Mail" and "Eastern Express." Occasionally I take out the "Empire State Express." I had charge of the engine that drew Admiral Dewey from New York to Shelburne, Vt., on October 12th last. We made the run from Spuyten Duyvel Creek to Troy, 139 miles, in 139 minutes.

Preventing Damage Suits

Before a fireman becomes an engineer he should be thoroughly grounded in the fundamental principles of his trade. He should know the engine from tender to pilot. He should be able to run the machine in case of an emergency quite as well as the engineer himself. Indeed he must be able to do this or he would not be fitted for promotion. If much depends on the care given by the fireman to his work, much more depends on the thoroughness of the engineer. A conscientious engineer is in the roundhouse long enough before he starts out to examine thoroughly every detail of his locomotive. He must do this himself and not trust to any one else. No detail should be too small to escape his attention. It takes me from an hour to an hour and a half to do this work every day that I take my engine out, and never, in the twenty-two years of my service, have I delegated it to an assistant.

Prevention is better than cure many times over. A large percentage of railroad accidents result from a failure to minutely inspect locomotives before the trip has begun. Every minute of the engineer's time is occupied when he is once on the road. He must see that the water in the boiler is at a proper height, that he has sufficient air to apply the brakes, that he has steam enough not only to run the engine but to keep the cars warm. He must watch every grade crossing and sound the whistle, and he must be constantly on the alert for the block signals. On the Hudson River division we have four hundred of these signals and they must be rigidly obeyed, for disobedience may mean disaster. When any part of the equipment fails to work, repairs must be made with as little detention to the service as possible, and the engineer who thoroughly understands his work is the one who succeeds in this emergency. To prevent these failures, however, he should ever be alert to detect anything wrong with the machinery the instant it occurs.

A Plunge Into the Hudson River

I will give you an illustration from my own experience. In 1893 I ran the "Eastern Express" from Albany to New York. Coming down from Albany one October night, I had almost reached Hyde Park when I saw ahead of me a freight conductor signaling with his lantern. He was near a switch and I supposed he was communicating with his own crew. After he had swung the lantern three times and started with the fourth swing, it flashed across my mind that something was wrong and I instantly put on the brakes, shut off steam, reversed, and sanded the track. We were running at the rate of fifty miles an hour, but before we reached the switch we had slowed down to thirty. Some cars had been derailed and tipped over on our track, and these we struck with such force that our engine, express and mail cars left the rails and plunged into the Hudson River. When we reached the bottom the water was five or six feet over my head. I tried to crawl out of the cab, but was wedged in so that I

could not move. I was just giving myself up for lost when I heard something give way about the boiler, and the engine partly turned over and released me. I shot up to the surface thoroughly exhausted, nearly unconscious, but otherwise uninjured. The fireman had come up as soon as the engine touched bottom.

I found that the freight train had been derailed near the switch an instant before we came into view. Indeed the time was so short that the tower man had no opportunity to set the danger signal. The track therefore was apparently clear, and had I not sensed danger from the signaling of the freight conductor the chances are that most of the cars would have left the track with the engine. As it was, no lives were lost and traffic on the road was only delayed a few hours.

THE SIXTH SENSE OF THE RAILROAD MAN

On another occasion I was bringing down the American Express train from Albany. It was so black and foggy that I could not see farther than the length of two cars ahead. When we had gone about a quarter of the trip we were stopped by signals, and I was informed that a freight train had broken in two, and that the first part had gone about fifteen miles ahead and was probably on a siding. From that point on, as you may imagine, I ran at reduced speed. We had gone a little more than fifteen miles without discovering the fugitive, when suddenly, and without reason, the thought came to me that it was time to stop.

"Elliott," said I to the fireman, "we have gone far enough without finding out where that freight train is."

I shut off steam and applied the brakes, and at that very instant the fireman shouted, "Great Heavens! What's that ahead of us?"

We had stopped within a car's length of the freight train. There was no light on the rear car, and in another second our train would have been wrecked. This kind of precaution does not come under any head that I know of. I do

not know what you would call it, so I shall set it down as "intuition," but it is a pretty valuable quality for an engineer to have on such occasions.

Another time I was going north with the "Southwestern Limited." As we rounded a sharp curve I saw a gang of trackmen carrying a rail across the track. Realizing instantly that it would be impossible for them to get over in time to clear the track unless I slowed down, I applied the brakes and whistled before shutting off steam. They heard the whistle, dropped the rail and saved themselves. The rail went under the pilot and slid along the track for fifty feet or more, but did no serious damage. If I had waited to shut off steam before applying the brakes and sounding the whistle, the men would have been killed and the engine probably derailed, as we were going at the rate of a mile a minute when we came upon them.

These three illustrations show the necessity for instantaneous action when emergency arises. There is no time for delay. On the engineer's judgment depends the safety of his passengers. At the rate of sixty miles an hour a train covers about ninety feet in a second—which is twenty feet more than the length of an ordinary passenger car. This will give the reader an idea of the necessity for action as rapid as thought itself when danger confronts the train.

Shooting Through a Snowdrift

The life of an engineer is not always a rosy one. Sometimes we are called out on some "old mill" whose flues are stopped up in bitter cold weather, with icicles hanging from the grate bars, and are required to make as good time as with an engine in first-class condition. Here comes into play all those fine points in locomotive handling that have been acquired during an engineer's earlier experience. A resourceful engineer, aided by a competent fireman, is often able to make the trip on schedule time, and if he does his work well he is not called "upon the carpet before the super" the next day to explain any failure to come up to the mark.

These weather conditions demand the patience of Job. They bring out all the qualities that have been formed during the long years of plodding, thorough industry of his apprenticeship. In extreme cold weather, on stormy days when the snow is piled mountain high over the tracks, as was the case in the blizzard of 1888, an engineer often is called on to do double work under circumstances that are almost appalling. At such times the engineer is face to face with emergencies from the roundhouse to the end of his trip, and the experienced man who has added theoretical knowledge to his practical training is often able to succeed where a less proficient man fails.

Take the blizzard of 1888 for an example. The road had been tied up for three days. I took the first train out of the Grand Central depot. Superintendent Voorhees was in the cab with me. Only one track was open, if you can call a track open that was covered with snow, and at times we were completely buried beneath the drifts. At Kingsbridge there is a sharp curve and rock cut, where it is customary to slow down. As I started to shut off steam Mr. Voorhees called to me: "Don't slow down," he said, "the track is buried in snow round the curve. I live here and know."

So I sent the engine ahead at full speed and we shot through a drift that was higher than the cab roof. Had we slowed down we might have been stalled. It took us nine hours to plow our way to Albany and I was wringing wet from the snow that poured into the cab window.

During this same blizzard many engines were stalled in the drifts, and the engineers and firemen were kept busy feeding the tanks with snow instead of water, to keep the engines alive and warm the cars. On occasions during the winter hours are sometimes doubled and even trebled, especially in the through freight service. I have known of men who have worked continuously on these trains for forty hours or longer. But these occasions, happily, are rare.

In spite of these hardships and of accidents railroad men as a rule live quite as long as other men. Most life insur-

ance companies now readily accept firemen and engineers as risks at a slightly advanced premium. By careful train management and the improved roadbeds of the present day loss of life has been reduced to a minimum.

Hours and Pay of Engineers

A railroad engineer is a good deal like a soldier. He is always working under orders. Nine-tenths of the employees of the transportation department are seldom under the direct supervision of their immediate superiors. From the moment I leave the roundhouse until I pull into it again at the end of the round trip I am constantly under orders that must be obeyed to the letter. Except in cases of emergency every action is laid down in the rules of the road. I always do certain things at certain points in the run, never before and never after that point is reached.

Such in outline are the duties of a locomotive engineer. The pay is fully as high, if not higher, than that paid to other classes of skilled labor. A switch engineer on the best roads gets about $100 the month; a freight engineer $140 to $150, and a passenger engineer from $150 to $175. Switch engineers work ten hours the day, every day in the week, with one hour for dinner. Freight engineers work ten hours the day, the week through. Local passenger engineers average eight hours work the day, with three Sundays off each month. Through passenger engineers average from fourteen to sixteen hours every other day. Their working time includes the "lay-off" at the end of the single trip at the other end of the run.

Upon the subject of education for engineers a volume might be written and not exhaust the subject. To begin with, no engineer can know too much, and the more knowledge a beginner has the better it is for him. A college education is better than a grammar-school training, and a theoretical education along technical lines is better than a collegiate education without that feature. Many of the best engineers in the country are making or have made up the

deficiencies in their early training by taking special courses of instruction in mechanical branches after they were already far advanced in their calling. I am now completing a course in theoretical mechanics, and if I should see any signs of a prospective change in motive power from steam to electricity I would at once fit myself to be a practical electrical engineer. That is the trade I have set my son to learn. Of course a beginner who has an education in these branches is better fitted, everything else being equal, to succeed in the railroad business than one who has not. But this need not discourage a man, as there is always time for study, and no man is too old to learn. Theory, however, is not everything, as I have tried to show. It must be coupled with practical experience to accomplish the best results, and this experience can only be acquired as I have acquired it, and as thousands of other men have acquired it—by years of hard and patient work on the deck of a locomotive.

Education Pays

There are other and immediate rewards offered to the conscientious and studious engineer than promotion in other departments. For instance, the railroad company shows particular favor to the best-informed engineers, and that in itself is as gratifying as an increase in pay would be. Suppose a superintendent of motive power contemplates making a test of the efficiency of certain kinds of coal, special grades of oil, recent inventions in tools, or new devices in engine construction. He details an engineer on whom he can rely to conduct the experiment. Upon the result of this engineer's test the alteration may be adopted or rejected. When a railroad plans a new train service, the run is divided between the most reliable engineers on the line, and the schedule of time is fixed in accordance with the time they make on that trial trip. The management trusts its best men, and this confidence is a remuneration to be prized as much as a pecuniary reward.

The manifold advantages of education have been fully

realized by most railroad managements throughout the country, and they have come to its aid in a manner both generous and practical. In almost every large city railroad clubs with reading rooms, libraries, and restaurants have been established for trainmen within the last few years. Most of them are under the direction of the Railroad Branch of the Young Men's Christian Association, and they offer benefits to the men that were not even dreamed of when I entered the service. In these clubs a man may spend his leisure time as comfortably and as profitably as in his own home. Indeed they offer advantages that few homes possess. The libraries are large and well selected. The reading rooms contain the current periodicals, daily newspapers, and the best class of railroad journals. It is in the pages of these trade publications that the richest field for technical study is found. The latest inventions and improvements are recorded there, and many an engineer has discovered in some article the practical solution of a problem that has long confronted him. Two hours in a club reading room or library are equal to a lecture in a class room, provided the desire to learn is in the man.

BUSINESS, TRADE, AND INDUSTRIES

The Street Railway Man

By WILLIAM AMOS BANCROFT

[William Amos Bancroft, man of affairs, was born at Groton, Mass., April 26, 1855. He began his education at the Lawrence Academy in his native town, passing from thence in 1873 to Phillips Academy at Exeter, N. H., where he completed his preparation for Harvard. From the latter institution he was graduated in 1878, and thereafter pursued his law studies at Harvard until 1881, when he was admitted to the bar of Suffolk County. He settled at Cambridge and entered local politics, being elected a member of the Cambridge Common Council in 1882. The following year he began his term in the Massachusetts Legislature, and in 1891 became an alderman of Cambridge, and was elected to the mayoralty in 1893. In 1885 he became connected with the Boston Elevated Railway Company, and, barring the interval between 1885 and 1890, maintained the connection, being elected in 1899 to its presidency. Military affairs have also interested him. In 1875 he enlisted as a private in the Massachusetts Volunteer Militia, his advance culminating in his appointment as brigadier general of United States Volunteers in the war with Spain. Since 1893 he has served Harvard University as overseer, in 1899 being elected to his second term of six years.]

TO most persons a big street railway system is a gigantic mechanism by means of which passengers are conveyed from place to place along certain definite routes. It is judged almost solely from the mechanical point of view, and seldom is anything taken into account except the machine-like precision with which its organization is expected to operate. The personal element, which is of supreme importance, is either forgotten or but lightly considered.

The success and efficiency of a railway system are, of course, limited and controlled by its capital, revenue, resources, and equipment, and the physical conditions under

which it is operated; but more important and fundamental than these are the character and quality of the men who actually plan, direct, and perform the service which the public receives—the men, that is, who lend it character and efficiency, but to whose labor and service so little attention is paid by the average passenger.

A person disposed to inquire into the human factor in street railroading might ask where all these fairly well-trained, fairly efficient, fairly civil motormen, conductors, guards, and the rest, come from: and how a sufficient number of them is secured. How are they trained for the responsibilities resting upon them—responsibilities far beyond those of the average clerk in even important offices; responsibilities that call for judgment, patience, tact, and quickness of thought in the daily routine of their duties as well as in meeting sudden emergencies where both life and property are sometimes at stake?

Again, what inducements does this business offer a young man for an honorable career of achievement? Is there an opportunity for motormen, conductors, and other subordinates to rise to higher positions of responsibility?

For the most part these questions must be answered, in the present article, from the standpoint of the Boston Elevated Railway, not quite the largest in the country, to be sure, but in many respects the most complicated and the most diversified, including, as it does, surface, subway, and elevated lines joined in a single comprehensive system, and requiring, therefore, an unusual variety of abilities among its various employees.

Rising from the Ranks

The ordinary public conception of the car service men of a street railway is erroneous in that it fails to recognize that in nearly all cases these are picked men—a relatively small number selected from many, chosen with reference to their physical and mental ability to perform work that cannot be satisfactorily accomplished except by men of peculiar fit-

ness—men who must possess, whatever their position, a fair share of real ability.

But the motorman or conductor who is fit stands a much better chance of getting ahead and finally attaining a reponsible and well-paid position than does the average clerk, let us say, in the average department store. Many, of course, enter the street railway service for temporary employment only. Lumbermen, for example, after passing the winter in Maine, come down to Boston in considerable numbers for the summer months. College students—a class in which Boston and the neighboring towns abound—desiring to earn money during vacation, are often attracted to the service, and a fair number enter it for a longer period —some of whom remain permanently. Men who work as farm hands during the summer often seek employment on the cars for the winter months. The great bulk of the employees, however, come with the intention of casting their lot permanently with the company, and of rising in its service.

The attractions of the service, aside from the opportunities for promotion, are that the work is healthy, the hours reasonable, the pay good, and the permanency of the work dependent entirely upon the ability of the employee to perform his duties satisfactorily. For those who possess the ability and ambition to get ahead, the possibility of attaining higher and more responsible positions is greater and the rewards of success larger than in most mercantile enterprises.

All well-managed companies select their operating officials from their own employees, if suitable men can be found—as they usually can—whenever a vacancy occurs or an office is created. In Boston, for example, the superintendent of transportation and all of the division superintendents, who are the higher officials immediately concerned in running the cars, began their railroad work upon the platforms of the cars or in positions even nearer the foot of the ladder. One was a hostler in the stables at the time when the motive power was horses and not electricity. Immediately subordinate to these men are many others who began

in the same way—in all several hundred men receiving up to $5000 a year salary who began on the front platform or the rear platform of the cars. The president of the most extensive interurban company in New England began his street railway experience on the platform. Besides this, it must be borne in mind that the surface, elevated, and subway systems of local transportation in this country are expanding enormously, with a consequent constant draft on the services of the already existing personnel to train and develop fresh forces of employees. And the man who has started as a motorman or conductor and has worked his way to the front—who knows the actual problems of a situation, in other words—is in increasing demand everywhere, from Oregon to Georgia.

It would be well, therefore, for any bright, enterprising, strong-bodied young man, just beginning to look around for a chance to succeed in the world to think seriously of the street railway service in our big cities as an opportunity for a career. In the beginning, at any rate, it is an outdoor life, in healthy contrast with the apparent trend of most young Americans toward indoor pursuits; but, unlike some forms of outdoor employment, education, good rearing, tact in dealing with men, and other qualities that are supposed to go more particularly with an indoor life, are of genuine importance.

A Good Constitution Needed

Not every man can get a position on the cars. One must, first of all, of course, be physically capable in order that the hours of standing may not expose weak points hitherto unsuspected. A sound body and steady nerves are indispensable. Both eyesight and hearing must be perfect. One's range of vision must be normal, and, for the Boston service, there can be no suspicion of color-blindness. In respect to character, the qualities required are—as in every business involving the assumption of responsibility and the handling of money—the four cardinal virtues of honesty, temperance, industry, and perseverance. If distinctions

should be attempted, one might say that the quality peculiarly essential in a conductor is that of tact. A little patience, a little diplomacy, and a little firmness often serve to restore order out of confusion, or smooth over a difficult personal situation. In every case the company stands behind the conductor in his honest enforcement of its rules, provided neither the conduct nor the words of the employee are such as may reasonably give offense. No company could obtain from its men the work it does—or could send them to the car platform with the equipment of self-respect which is necessary for the performance of that work—if it were not absolutely just in protecting them from whim, ill temper, and arrogance. On the other hand, of course, a breach of the regulations, rudeness, or impatience will bring prompt rebuke and discipline.

THE MOTORMAN

In some ways the position of motorman, especially upon the elevated lines, which are gradually being required by the growing congestion in the large American cities, is more important than that of the conductor. His preliminary training is stricter and more technical. The difference in the two duties may perhaps be explained by saying that the training of a conductor contributes to his development in the handling of human emergencies, so to speak—a training which he must have largely acquired from his own experience in dealing with men—and that the training of a motorman fits him to meet physical emergencies, and must consequently in a large degree be special. In Boston there is a regular school for elevated motormen, which is perhaps more thorough, in certain respects—and necessarily so on account of the special difficulties of the Boston situation—than those which have been established elsewhere. In this school the candidate for a motorman's position learns the routes, the signals on every route, how to handle his cars and their mechanism, and what to do in case of accident—all before he is permitted actually to take out a train. A curious knack—a dozen different kinds of knacks, indeed—

are required in a really fit motorman. He must think quickly, and not only think quickly but rightly; and even thinking quickly and rightly is not enough. He must have that special kind of relation between mind and body which causes quick and correct thinking to express itself on the instant in quick and correct action. A keen and alert mind, one not apt to get confused whatever the circumstances, is preëminently the quality he must possess, over and above the strength of body which will enable him to endure the necessary daily physical strain.

There is always the possibility of getting ahead in every rightly managed—which means every successful—street railway service; the possibility of attaining a higher position by way of the car platform—and that, too, in a great and constantly increasing business, which in ten years, perhaps, will present ten opportunities for every one available to-day. One may be very sure that many eyes are alert to select from the conductors and motormen the men fit for advancement, for this continuous search for competency is obviously to the advantage of the company, which has positions for which sometimes it seems almost impossible to find exactly the right men—positions, moreover, that require a previous training "from the ground up."

The Conductor

As a conductor learns to deal with men and to look after the safety and convenience of passengers, so the motorman acquires a knowledge of the routes, the track layout, the equipment, and the method of moving cars. Either, however, may become a starter, which is commonly the next higher position, and one which places a man clearly in line for still higher duties—inspector, chief inspector, division superintendent, and the rest. Becoming a starter, it is to be remembered, marks the accomplishment of perhaps the most difficult step in the progress upward. It is easier for a man of conspicuous ability to pass from the ranks of two hundred and fifty starters than from the ranks of five thousand motormen and conductors, for the reason that individual ex-

cellence is more easily recognized among a few than among many, however genuine the company's effort to find it among all ranks. Once a starter, a man begins to acquire a fuller knowledge of the operation of a great system, of the handling of traffic in the aggregate, and of the problems that must be mastered before broader fields can be entered upon. He must learn, or must have learned, something of electricity, something of mechanics, a little civil engineering, a little about track construction, about the repair of cars and about equipment of all sorts, and something about the handling of exceptional and extraordinary crowds at unusual times—in fact, an endless variety of things must be grasped and mastered before he can become an all-round, well-equipped official.

Men enter the service from all classes and conditions of life. Most of the men employed by the larger companies are, of course, drawn from the cities in which they operate, but there is a considerable proportion who come from the country. It is a somewhat regrettable fact that, in the East at all events, the old-fashioned farmer's boy is a disappearing type, but it is still noticeable that those who come from the villages and smaller towns are very apt to make excellent railroad men. Indeed the street railroad business presents a peculiarly favorable entrance to city life for such as these. Work in the fields has inured them to the summer heat, and the breaking out of roads in the winter has toughened them to the kind of work required in the fighting of snowstorms. They come from one form of out-of-door life to another; and in changing from country to city—a change which is proverbially full of danger—they thus maintain a connection between old habits and new which may well be of the greatest advantage, morally as well as from the merely worldly point of view. Most of the officials in Boston who have directly in charge the handling of cars and traffic came into the service from the country, and have won their way on account of their sound common sense and ability to overcome difficulties, supported by the rugged constitution and good health which are a heritage from an early life spent

mainly in the open air and in all weathers. It must be the feeling of every street railway official—it certainly is in Boston—that the more of these strong, rugged, bright, alert boys from the country apply for employment in the service the better the service will become, and the more faithfully and efficiently it can discharge its duties to the community in which it operates.

Technical Training

To such a young man, rightfully ambitious for the future, some preliminary special reading and study will not come amiss. The almost universal use of electricity as the motive power of the modern street railway clearly calls for a more scientific training on the part of all who would rise in the service than was formerly required; and the man on the platform who knows something of natural science, other things being equal, is the one most likely to be in demand when the question of promotion to a higher position comes up. A good book on the general problems of electricity will be the natural beginning of a course of reading; though unfortunately not many such, adapted to the comprehension of young men with no previous technical education, have been published. "Electricity Made Easy," by Edwin J. Houston and A. E. Kennelly, may be recommended, however, as being on the whole satisfactory. The same authors have written a series of "leaflets"—as they are entitled, in spite of their containing some three hundred pages each—on Electrical Engineering, which in the opinion of many electrical students are among the best books of the kind on the market. They come in three grades—elementary, intermediate, and advanced—only the first of which, of course, can be recommended to the novice. The object throughout is to present the fundamental principles of electrical science; and the first volume is especially intended to give just such instruction as the motorman, or the electrical workman generally, with slight scientific knowledge of electricity, needs for a more intelligent performance of his daily routine work. Two other books that may be suggested have to do specifically

with electric railway service—"Electric Railway Motors: Their Construction, Operation, and Maintenance," by N. W. Perry; and "Electric Railway Motors," by George T. Hanchett. Both are sound, and not too difficult.

There are two periodicals covering the street railway field, one or both of which might well be read by every one in the business, from conductor to president—the "Street Railway Journal" and the "Street Railway Review." No scientific or technical periodical, of course, should be regarded from the same point of view as a book, where the intention is to be definite and final in statement and conclusion; a magazine of this sort is to a considerable extent a record of current theory, opinion, and experiment, leaving to the reader much of the burden of responsibility for sifting the wheat from the chaff of contemporary practice. With this caution—which applies to every publication of the kind aiming to present impartially the news of its special field—both journals may be unhesitatingly recommended, giving, as they do, from issue to issue, a full account of the latest developments in every branch and department of the street railway business all over this country and abroad. Among electrical magazines the "Electrical World" and the "American Electrician" are excellent, but rather hard reading for beginners; however, if they are conveniently accessible to a young man they might often prove suggestive. During the last few years a number of "correspondence schools," so called, have been started in various parts of the country, some of the courses in which, I am informed, are admirably adapted to the needs of a young man who intends to enter, or has already entered, the street railway business. Though it is true that all companies undertake to give their men such instruction as may be necessary for the performance of their duties, it is equally true that one who, by additional study and reading, has gained a fuller knowledge of the theory and nature of electricity, as well as of its practical application, stands in a more favorable position than one who has not.

BUSINESS, TRADE, AND INDUSTRIES

A Railway Man's Outlook

By HERBERT H. VREELAND

[Herbert H. Vreeland, railroad president, was born at Glen, Montgomery County, N. Y., October 28, 1856. He has been connected with railroads almost from the first self-supporting years of his life. Coming to New York City he worked on the gravel car, shoveling gravel on the tracks at night. From this he was promoted to be foreman of a yard, and by a steady advance he has now attained to the presidency of the most important street railway system in New York, the Metropolitan Street Railway Company, and many of the lesser crosstown roads. He is a director of the American Surety Company and of the Morton Trust Company, president of the New York Railroad Club, and vice-president of the Street Railroad Association.]

BUSINESS methods in every walk of life have changed enormously during the last ten years. In no branch of industry, however, has there been such a miraculous change as in the street railway business. A few years ago a man working for a street railway, whether he labored at the top or at the bottom, had a nondescript occupation. He was not much of anything. He had no special knowledge. He had neither a trade nor a profession. The president was invariably the chief owner of the line, but there was nothing he was called on to do that could not be done by any man with a fair knowledge of business. Of the superintendent it was chiefly required that he should know how to feed horses to the best advantage, and how to handle a small number of men. There is not a section boss to-day who could not have been worked up into a fairly good superintendent. The stable foreman was simply a boss hostler. The driver

was any man who could handle reins over a pair of middle-class horses or run-down mules. The conductor had no standing whatever—anybody could fill that position. In the car barns were a lot of men, of whom nothing was expected, except that they should be able to lift an oil can and pack the axle bearings with greased rags.

Now everybody connected with street railroading has a distinct profession or a clear-cut trade. Instead of being one of the most dreary and hopeless and unsatisfactory and unambitious pursuits in life, as it was under the old order of things, street railroading offers a career as brilliant as any to be found in the world. Young men who have their way to make, and who have in them the right stuff, can start in at the bottom and win for themselves a place that is both honorable and lucrative. No calling to-day pays better in either its higher or its lower ranks. Even the switchman on our electric roads, the man who stands with an iron bar at the junctions and cross-rails, has risen to the dignity of following a calling that is classed as a trade, and is paid accordingly. In the old horse car days the switchman's work was almost invariably performed by boys who made fifty cents a day. To-day our switchmen get $2 a day.

INDUSTRIAL CONSOLIDATIONS

It is much the fashion, nowadays, to decry consolidations of capital and enterprise. These consolidations, it is freely alleged, destroy competition, oppress the citizen, reduce the number of workmen, and deprive the young man of a legitimate opportunity of rising in the world. I know of nothing that shows up the absurdity of these claims so thoroughly as does the street railway business. In every city of any size, we now have the very highest type of consolidation exemplified in this industry. Under the new system it has been found imperative to merge many roads into one, in order that the best results may be obtained; and what has been the effect? Let us take New York as a fair example—and it is only a fair example, for what has been done here has

been done on a greater or lesser scale in every city in America.

I shall leave out of consideration the improved service to the public and the other questions that affect the general citizen, and deal only with those questions that affect the employees and the chances of success for young men.

Instead of reducing the number of employees the street railway consolidation has had exactly the contrary effect, and on a scale that will amaze the outsider. The Metropolitan Street Railway system embraces what were formerly eighteen distinct roads, all under separate management, yet our pay roll to-day is five times as large as was the combined pay roll of these eighteen properties that we took over; that is, we employ five times as many men as were employed in street railroading in New York ten years ago.

One of our lines—the Fourth Avenue—will serve as an illustration of the changed condition that has come over the whole. On that line, under the horse car system, there were formerly run one hundred and twenty cars a day. At present we run two hundred and sixty-five cars, and this in spite of the fact that the cars are run more than twice as rapidly as they were with horses. The average rate of wages in the lower ranks ran from fifty cents a day to the switchman, up to $1.75 for drivers. To-day, as I have already stated, the switchman gets $2, and the motorman gets $2.25. The gross earnings of this road in horse cars were $750,000 a year. The gross earnings under electricity last year were $2,300,000. The skilled electrician has supplanted the hostler; the skilled mechanic the barn laborer. The superintendent is a high-grade, highly paid, professional man. He has under him assistants who, both in pay and standing, far outrank the superintendent of old days.

This is what consolidation has done. It has made possible such development in this single line; and under the system as a whole even more wonderful things have taken place.

The only people who were displaced were the eighteen presidents, whose power I now represent. Surely, consoli-

dation has done no harm there, for these eighteen men were capitalists who could well afford to retire, and who in wider spheres have done much more good in the world than they could possibly have accomplished in the narrow, circumscribed position of head of a horse car line.

There have grown up great and important departments that were formerly as unknown and as undreamed of as they were unnecessary. There is a maintenance of way department that looks after the roadbeds. There is a maintenance of equipment department. There are engineering and motive power departments, a financial and accounting department, and others. At the head of these departments are expert and high-priced men. They have under them expert and high-priced assistants. In all these departments there is constantly a sharp lookout for bright and capable young men. Such young men, when found, are greedily snapped up, and given every opportunity to get to the top. The result is that there has been attracted to the street railway business a class of brains of the highest order. The demand for good men is still very much greater than the supply, and the boy who goes in at the bottom, attends strictly to business, and puts his whole heart and soul in what he has to do, is absolutely certain to make his way.

The whole scheme has been uplifted. Instead of harm having come from the killing off of competition, great good has resulted to everybody. There is a sound principle in the new order of business. We know that improved service creates new traffic. The better the service, the greater the number of people who avail themselves of street cars. This is exemplified in the enormous increase of earnings, and bears fruit in the creation of thousands of new places for the workingman. Any other policy than that of giving the best possible service is stupid, and will not be tolerated by the capitalists who provide the means to carry out the new plan. They are all shrewd business men and will work along the lines that give them the best returns for their investment.

The harm that is done to the young people of the community by dinning constantly into their ears the alleged fact

that under the new conditions of consolidation they have not the opportunities that their fathers had is incalculable. Fortunately many young men do their own thinking here in Amercia, and these young men will refuse to be misled. They will profit accordingly. The new order offers opportunities that were unknown in the old. Formerly railroads, whether they were steam roads or street roads, were handed down from father to son, very much as though they had been butcher shops or corner groceries. The founder of the family would accumulate a fortune, put all his money, or the bulk of it, in one road, and administer its affairs as president. The good places under him went to his sons and the other members of his family. When the old man died the oldest son would step into his shoes, and so the process went on.

Men from the Ranks at the Top

Now it is the man from the ranks, the man who has gained his knowledge through hard experience, and through active participation in the work of the road, who is put into the presidency. Subordinate positions are similarly filled. The stock is owned, not by one man, nor even by one family, but by half a dozen or a dozen men, or a dozen families. The stockholders will not tolerate nepotism. The son of the stockholder, instead of being benefited by the fact that his father owns a share in the capital, is handicapped by this fact, so far as it creates for him an opportunity to get into an important place. If the son of a rich father gets into such a place, his success is not due to his wealth, but is won in spite of it. He must demonstrate very clearly to the other owners of the property that he is the right man in the right place, and they will scrutinize his abilities much more closely and exact of him much more pronounced results than they will of a man who has worked his way from the bottom, and who has nothing except his brains and his demonstrated willingness to work.

The capitalist is content, under the new scheme, to act in an advisory capacity, and his sons, when they inherit his

H. H. VREELAND,
President Metropolitan Street Railway Company.

wealth, of necessity fall into a similar place. The executive work is left to the experienced man who has manifested his fitness for his position, and who, having worked all his life on a salary, has little or no money. Thus the consolidation of capital, instead of restricting the opportunity of the young man, really creates the opportunity on a scale that heretofore has never existed.

A glance at the great interests of the country proves this conclusively. In the so-called Vanderbilt roads, is there a single Vanderbilt in an executive or controlling position? Not one. The president of the New York Central is a man who was formerly a freight clerk. The president of the great Huntington road, the Southern Pacific, was formerly a clerk in a railroad office. And so it is in every other pursuit or industry where capital has been combined. Family influence and pull count for nothing. The president of the Carnegie Steel Company is a young man who began, a few years ago, as a laborer. The president of the New York Life Insurance Company was not so very long ago a clerk. The highest salaried bank president in America started in as a messenger boy. Can any one ask fairer conditions than these?

College Education

No man can get too much education. Especially no man can get too much technical education; but the absence of an educational equipment at the start is no barrier to success. The Carnegies and the Fricks and the Schwabs, and the others, prove this very conclusively. As matters stand, it is a question whether a college education helps at all in business, or in the pursuit of industrial enterprises where a technical knowledge is required. Mr. Schwab was at twenty-three the chief engineer in charge of the construction of the Homestead Steel Works—the largest plant of the kind on earth. At its completion he was its chief director and manager, yet he never spent a day in college in his life. The knowledge that was necessary to enable him to fill these positions he picked up during and after working hours.

It is a very simple proposition. The boy who starts in at fifteen or sixteen with a common school education is content to accept a nominal wage. He is worth nothing to us, practically, at the outset, and he understands this if he is the right kind of a boy. We start him in at $3.50. If he applies himself, and takes advantage of the opportunities for advancement that constantly offer, he will, at the end of six or seven years, be worth a good deal to us. He will be an important cog in the wheel, and will be earning a very good salary.

About that time the college man comes along at the same age. He starts in at once with the assumption that he must capitalize his education. He has spent five or six years in accumulating a large store of knowledge, and puts that in as a distinct asset when he offers his services. He comes to me for a position, and, equipped as he is, he is worth about five dollars a week. Nine times out of ten he turns up his nose at what he considers an absurd proposition, and goes his way. He will hunt around until finally he comes across a man who, having only one or two employees, has work of a character that enables him to take advantage of the peculiar mental equipment possessed by the college graduate; therefore he is in a position to offer him a much better salary than the Metropolitan Street Railway could. This tempts the young man to accept service with this class of employer. He ties his whole future and fortune to one man. If anything happens to this man, the college graduate at the end of five or six or eight years is no better off than he was at the beginning. It is for this reason that so few college graduates are to be found in the upper places in the service of great corporations.

Social Relaxations a Handicap

Then, too, the college graduate has other handicaps. He has social ties and connections. He is a member of a college society, and when that college society has an affair on hand he wants to attend it. He is interested in the col-

lege football team, and in the college eight. He asks a day or two days off to attend a football match or a rowing contest. He may have become quite an important cog in the big machinery, and his dropping out may mean serious disorganization, but nevertheless he wants to get off at any cost. It was not so long ago that one of the most promising young men I have ever known threw up his position with the Metropolitan Street Railway Company, after a service of three years, rather than miss a rowing contest between his college eight and the eight of another institution. When he went to the chief of his department for leave of absence it was pointed out to him that it was impossible to grant such a leave. He insisted, and appealed to me. I reasoned with him because I took an unusual interest in him, but it was useless and we had to let him go.

The desire for social relaxation at the formative period in a young man's business life has done more to keep bright men back than almost any other cause that I know of. "All work and no play makes Jack a dull boy," is one of the numerous old saws that have brought untold mischief, and that are founded entirely on fiction. Work, even unremitting, continuous work, never yet harmed any young man, or if it did, the exceptions are so few that they don't count.

Why is it that ninety-five per cent of the men who achieve the great successes in our city are country boys—young chaps fresh from the farm or the little country town? It is because they have no opportunity for social relaxation when they get to the big city. They have no social ties. Nobody knows them, and they know nobody. Nobody cares for them. They strike the big town, get a job somewhere at any figure, and settle down to solitary life in a boarding house. Their income will warrant only the renting of a small, cheerless room, generally a hall room without any fire and precious little light. Existence in this sort of a room is not very rosy, and the young fellow is only too glad to spend his evenings in the well-warmed, well-lighted office, if he is employed in an office; or in the library, lecture

or reading room, if he is employed in a shop that closes down at six. So he puts every spare moment that he has into work. After a while there grows out of this necessity a habit, and when better times come and he can afford a brighter and cheerier room, the habit of work is so thoroughly formed in him that he perseveres in it, after the immediate necessity is past. He has formed no taste for parties that keep him out until two or three or four o'clock in the morning, and which unfit him for business next day. If he goes to the theater now and then, his life has been formed on such regular lines that he goes to bed immediately after, and gets a good night's rest. He has formed no connections that take him out to late suppers afterward, and keep him out until all hours.

The city boy, on the other hand, going into business, continues his close relations with the people with whom he has grown up. He knows all the boys and girls in his neighborhood, and joins in their entertainments after his working hours. His spare time, instead of being given up to work or study, is given up to social distractions.

That is why such an unusually large percentage of country boys succeed, in competition with the city boy, in getting to the top. The outdoor life they have led has given them a good frame to work on, and the lack of opportunity for keeping late hours preserves the full strength of this frame. With such conditions the city boy can rarely compete.

Home Restrictions

Another thing that in some cases helps the country boy is his freedom from home influences and home conditions. He gets away from his mother's apron strings, and is denied the benefit of her motherly pride and solicitude. I made this statement recently in an assemblage where there were a considerable number of women, and it was met with a gasp of indignation. It is true, in some cases, nevertheless.

Almost every mother thinks her boy the brightest and the best and the most deserving boy to be seen anywhere.

This is as natural as the instinct of maternal love. If any mistakes are made she thinks the fault is not her boy's but that of his associates and of his employer. This disposition of motherhood, altogether charming in the abstract, is sometimes injurious in the concrete.

I heard a story not long ago of an Irish lad and his mother. The son had joined the army, and, as his regiment was ordered to the front, she went to the city to see him off. When she came back she was full of the glory of her firstborn.

"Did the soldiers look fine as they marched away?" she was asked by one of her gossips.

"They did. They looked grand, and my Jimmie was the finest of the lot. You ought to have seen him. The whole street was filled with people that admired him that much, because all the soldiers were out of step but himself." That is the mother's natural view of it.

We had a soldier in our office not long ago who furnished an example of the harmfulness of a mother's pride and devotion when it is of a mistaken character. He was a bright-faced, promising little chap, who did his work well and thoroughly. He attracted the attention of every one in the office by his alertness and the great interest he took in his tasks. One day he disappeared. No word came from him until he came to get the envelope that contained his pay for the two days that he had worked during the week. The head of the department, who had taken a decided fancy to him, asked him what was the matter. It then came out that, on the day before his disappearance, the boy had been put to cleaning out inkstands. Naturally he stained his fingers. When he got home his mother noticed the stains, and asked where they came from. He explained, and the good woman at once gave orders that he should not be humiliated again by being forced to work in an office where his superiors had so little consideration for his worth as to put him to the humiliating task of cleaning out inkstands.

In my own career there was a time when a mother's advice might have proved my undoing. I came to the city

and fell upon hard times. I could get nothing to do except the most severe manual labor. My hands were blistered and my back was almost broken. Month after month and year after year this went on. My job was shoveling gravel on the night gravel train. I was fearfully discouraged and almost ready to give up. Had my mother given me the least encouragement to throw up my job and go back home I should have done so. Fortunately she was an exceptional woman. She was more concerned in the kind of life that I led after working hours, and what my surroundings were in the place I called home, than she was in the class of work I was doing. Thanks to the knowledge that she had that hard work hurts nobody, I kept on. When I see how many young fellows are encouraged at home in the belief that they are being overworked, I can realize better than I ever did before how fortunate I was in my mother.

INDEPENDENCE IN JUDGMENT

Fathers are sometimes as great a menace to the boy as mothers, and so are uncles and other worldly-wise relatives and friends. When the time comes for the boy to strike out into the world and do something, he naturally turns to elderly men about him for advice. He is perhaps told, "Do not go into my business."

Why? Because the man who tells him this has been a failure in his business. If a young man came to me and said that he wanted to go into the street railway business, that he felt that he liked it, and that he thought it would give him an opportunity to rise in the world, do you think I should tell him not to? If he went to Mr. Schwab and said he wanted to go into the steel business, do you suppose Mr. Schwab would tell him to avoid the steel business as he would the pestilence, as there is nothing in it? I think the street railway business is the greatest business in the world. The fellow who has tried it and has failed because he was too lazy, or mentally or physically inferior, thinks that it is a mighty poor kind of a job, and that if he had only tackled

something else he would have done very much better; he feels certain that he would have made a first-class banker, or the finest stockbroker on the Exchange, or anything else that he might have gone into except the business that he very foolishly selected.

Do not seek advice too frequently, young man, and do not follow it slavishly. Make up your mind for yourself and strike out along the lines that you feel you are fitted for. Do the best that is in you. Be honest. Do not watch the clock for quitting time. Do a little more work than is expected of you. Keep your eyes open. Take advantage of your opportunities. Study. Learn everything you can. Read all the literature you can find bearing on the pursuit that you mean to follow. And you will succeed. You may not get to the very top, but if you do not it is because you have been unfortunately denied some mental or physical attribute that is essential to a place at the top. But follow this course; concentrate and you will succeed.

That is my advice to the young man who wants to win.

The Telegraph Expert

By ALBERT BROWN CHANDLER

[Albert Brown Chandler, president of the Postal Telegraph Company since 1886, was born at West Randolph, Vt., August 20, 1840. He learned telegraphy, and at eighteen became manager of the Western Union Telegraph Office at Bellaire, Ohio. From 1859 to 1863 he was in the service of the Cleveland & Pittsburg Railway, and from 1863 to 1866 engaged in the United States military service. Serving in various capacities with different companies he finally became president of the Fuller Electric Company in 1881, and in 1884 was appointed counsel for the Postal Telegraph and Cable Company, of which he became president on its reorganization in 1886. He has also been vice-president and general manager of the New York Quotation Company since 1890.]

THE telegraph business is unique among the important industries of the world. In itself it offers comparatively few of the great prizes obtainable in other important lines of business. On the other hand, it seems to furnish better opportunities for promotion to responsible positions in the world's affairs than is true of almost any other employment. This appears to be proved by the fact that a large number of one-time telegraphers are now leaders in finance, commerce, manufactures, and railway service. Andrew Carnegie was a telegraph operator; and Sir William Van Horne, builder of the Canadian Pacific Railway; Mr. Hughitt, President of the Chicago & Northwestern Railway; Mr. Earling, President of the Chicago, Milwaukee & St. Paul Railway Company; Mr. Oakes, former President of the Northern Pacific, and many others occupying positions of great importance and responsibility were telegraph operators. Even

Wall Street has among its prominent men quite a number who began their business life at the telegraph key.

It is not mere chance that has pushed these telegraphers to the front. Their progress has been due in a large measure to their early connection with the telegraph business. Telegraphy sharpens the wits. No one becomes a skillful, accurate, and rapid sender and receiver of messages who is not mentally alert. The service tones the mind and quickens the faculties; but the reason for the success of so many telegraphers is not due wholly to this phase of the business. It is to be found mainly in the opportunities offered telegraphers to get in close touch with men who carry the burden of extensive and important business.

Vast establishments like those in the principal stock yards of the country, the steel companies, and many other manufacturing concerns are provided with a telegraph department within their own works. Many bankers and brokers in Wall Street, and other large commercial houses, are similarly equipped, and the chief officers of railway companies have constantly at their command the most skillful operators they can find for the handling of dispatches. It is natural that operators so employed should be brought in close relations with their chiefs. Business of the most confidential character is intrusted to them. They have many opportunities for improving their skill, industry, alertness, and loyalty. In many cases but a small part of their time is occupied in the actual transmission of messages, and if, instead of folding their hands in idleness when not at work at the key, they show a disposition to be helpful in every practicable way, they soon become almost invaluable in other confidential service, and thus have frequent opportunities to show their fitness for the conduct of other business than that of the mere handling of dispatches; so that when promotions are to be made, and the chief is looking about for some one upon whom he can rely, the telegraph operator at his side not infrequently is given the opportunity to try. When he measures up to the new responsibility it is very likely to prove a stepping-stone to still higher duties.

The Direct Road to Promotion

I am sometimes asked what feature of the telegraph service is most likely to bring promotion, and what course should be pursued in order to secure the most rapid advancement, and as to my own experience. Some operators attach special importance to very rapid transmission. Others study and practice to make clear and accurate copy, while others devote most of their time and attention to the electrical, mechanical, and scientific features of the business. Though all of these are important, and all should be sought for with persistent diligence, none of them is certain to lead to any considerable advancement without other qualifications. Continuous industry, a disposition to be helpful in every practicable direction, and especially the exercise of good judgment, sound sense, and discretion in the ordinary handling of business—and particularly in the midst of trying circumstances—are characteristics that should be aimed at by all employees in the telegraph service who are ambitious (as all should be) to improve their condition, and render the most useful service of which they are capable. The man who contents himself with doing what he thinks is his duty in a purely perfunctory way, taking care that he does not perform extra service except for extra pay, soon finds his place; and it will not be a place at the front, even though he may be skillful within the limits which he assigns himself. It seems strange that so plain a truth should not be well understood by every intelligent person, but it does not seem to be so. There are many persons of that sort, and they are among those who wonder why some one else is preferred before them when opportunity for promotion occurs.

In my own case I came to be a telegraph operator in the country town where I was born through having learned typesetting in the intervals of school, which brought me into occasional service in a book store in which the local telegraph office was situated. Just past my eighteenth year I was made manager of a commercial telegraph office of some

importance. Most of the work was in the interest of two railway companies. I devoted myself very constantly to the various duties of the office, and was soon promoted to a place with the superintendent of one of the railways. I had cultivated a clear style of penmanship, which is an important essential both for operating and clerical service, and the aid I rendered in the making up of pay rolls and other work not strictly within my own province evidently attracted the attention of my superiors—as voluntary work done outside of regular duties is likely to do—and within a few months I was appointed to the agency of an important station. From this time forward, although my progress has not been remarkable, especially by comparison with that made by many others, it has been continuous.

Moderate Incomes the Rule

In the nature of things there can be no very great reward for those who enter telegraph service and remain in it. Although the business itself is extensive, there are no positions connected with it that compare in point of emolument with the higher positions in many of the great railways, insurance companies, and banking institutions, manufacturing establishments, and some other kinds of business. But the telegraph industry is loyal to its own, and such advancement as it has to offer goes almost exclusively to those who graduate from the key.

Most operators are trained in telegraph offices, usually beginning as messengers, and picking up operating by close attention and growing familiarity with it. Hardly any other business prepares a young man or a young woman from seventeen to twenty-five years of age actually to earn as good pay as is realized from first-class operating service. But many have attained at twenty-five years all the skill that they ever acquire, and perform as valuable service—as operators only—as they are able to render in later years. The pay in advanced places is fair, and the work offers a reasonable future, but there can be no salaries in it such as are paid to a comparatively small number of persons in the employ-

ments that I have mentioned. Almost every office manager and nearly all the higher officials of the telegraph companies are telegraph operators.

The keenest intelligence is needed in the telegraph service. The educated man has a much better chance for promotion than the uneducated man. The college graduate, if he has in him the right sort of material, has greater possibilities of promotion than the man who is not a college graduate. But he must be the right sort of a college man. The average young man, who seeks a higher education merely for the polish that it gives him, is not so likely to develop a high degree of usefulness as the boy who enters business early in life, and devotes the four years that the other man spends in going through the university to active practical work. No man in this world can get too much genuine education—nor enough, for that matter—but with the opportunities afforded to-day a man may pick up all the education that he needs to obtain from books, at the same time that he is at work earning a living, if he will devote himself earnestly to it. Few men who are fitted for places at the front are seriously injured in their prospects if they have failed to secure a college training. They will succeed just the same.

In the telegraph field there are only two considerable companies in this country, and the nature of the business is such that there are not likely to be more. The companies are doing business now at rates that bar newcomers absolutely from all reasonable motive for further competition. Therefore there is little prospect that the field for executive men in telegraphy will be greatly enlarged. On the other hand, the conditions are such that it may, in the future, be restricted. The advent of the telephone practically cut off the growth of short distance business, and, though there has been a considerable and steady growth in the number of messages transmitted from year to year, it has not been in proportion to the growth of the country and the growth of many other enterprises. Nor has anything like the ratio been maintained that formerly existed.

BUSINESS, TRADE, AND INDUSTRIES

The Messenger Boy

By E. J. NALLY*

THE office of a commercial telegraph company is to-day the biggest, and I believe the best, training school for active business life open to a self-supporting boy or young man. It is the widest and most direct "open door" to commercial opportunity that a bright lad can hope to enter. To be sure it is a rough-and-ready school, but this must be classed among its advantages, for it helps to make prompt, practical, pushing men—quick of wit and nimble of limb.

These assertions may seem sweeping, but they are easily capable of proof. In fact they are proved a hundred times in every business day of the year. Only one qualification need be made to the statement that commercial telegraphy is the most fruitful and efficient drill ground for service in the business world. This is, that the messenger boy be considered part and parcel of the telegraphic service—and he is a most vital and important part thereof. Properly he should be regarded as a potential operator—a telegrapher in embryo. The fact that only a small percentage of messenger boys master the mysteries of the key and sounder does not vitiate this view of the case, for it still holds that from their ranks comes the main body of recruits for the army of skilled operators.

The telegraph messenger service is recognized by the business world, in the big metropolitan centers, as the most

* General Superintendent Postal Telegraph Cable Company.

available and reliable employment agency for office boys and clerks at the command of the employer. Thousands of positions are annually filled from this source, and it is a part of the daily routine of the telegraph official's duties to satisfy demands of this kind. His telephone is frequently rung by patrons who ask: "Can't you send us a bright boy right away?" And these requests are not denied, because the man who makes the request is a patron, and knows, by personal observation and experience, that the telegraph official has just that kind of a boy on his pay roll. While it inconveniences the official to accede to these demands, yet to refuse would be to offend patrons who pay the company thousands of dollars a year, and would also shut out a deserving boy from an opportunity which promises to develop into a substantial business career.

A Messenger Boy's Chances

It is not to be inferred from this that the door of opportunity for advancement in lines outside telegraphy is closed when the messenger boy becomes an operator. If his chances to get on in other departments of commercial and industrial effort do not increase with his promotion from the messenger's bench to a clerk's desk and the operator's table they are certainly strengthened, and each day of service at the key adds to his efficiency and his power to grasp almost any line of work that the world has to offer. Because of these conditions I do not hesitate to say a boy who must make his own way and find his niche in the rough-and-tumble of business strife cannot do better than begin as a messenger boy. Counsel of this kind should not be offered on a slight basis or without the most serious consideration resting upon years of practical experience. In this case it is the result of more than a quarter of a century of continuous service in the telegraphic field, beginning with the messenger boy's bench and including the official desk—including practically all the progressive stations from the elemental one to that of executive official.

As for the messenger boy—the familiar butt of the newspaper paragrapher and the cartoonist, who delight to portray him as the type of slow-going inefficiency—I am free to confess that I never cease to marvel at the promptness, courtesy, energy, and devotion uniformly displayed by this tireless little runner of the world's business errands. Familiarity with the conditions which surround his daily life only deepen the conviction that he discharges his exacting duties with a faithfulness and efficiency that would raise the standard of fidelity, energy, and promptness were the average services of the adult workers in the business world up to the pace which this small hustler sets.

Why do business men so generally appeal to the officials of the commercial telegraph companies for boys to fill their lesser positions? This is a fair and natural question. Answered in fewest words: Because the service of the messenger boy is of a kind which sharpens his wits, focuses his observation, broadens his view, fires his energies, fortifies his resourcefulness, and inspires him with a sense of exacting responsibility.

A Hot Race for a Message

A change comes over a boy the moment his first message is placed in his hand. Intuitively he realizes, at that instant, that he is intrusted with a genuine and grave responsibility. He seems to feel a touch of the subtle magnetic current—the soul of telegraphy!—and grasps the vital, energizing realization that time is the essence of things. There is a brightening of the eye, a quickening of the step, and a general awakening of the senses. One of the most important and interesting figures in the world is a boy in a new uniform and with his first telegraph message in his hand! Nor is this attitude an exaggerated one. There is something portentous about a telegram. Each message has a history, and the presumption is a fair one that each telegram plays an important part in the history of a person, a firm, a corporation—perhaps of a great political party, state, or nation!

Under the impulsion of this realization the spine of the boy stiffens, his faculties bestir themselves with new life, and he becomes instinct and alert with a livelier sense of being than he has ever before known.

While, in time, the novelty of this sensation may wear away, it gives place to a confirmed habit of promptness, of facility to grasp the demands and exactions of business life. He learns that the main thing is to "deliver the message to Garcia"—and that in the briefest time possible.

The energy which is thrown into the accomplishment of this purpose is little short of astonishing to those who have lost the elasticity of boyhood and the fire of youth. On my desk, as I write, are two expense bills which forcibly illustrate this characteristic. One is for a surgeon's services, and the other for a glass set in the door of an office. Many firms have call boxes of both of the telegraph companies in their offices, and when "rush services" are required pull both boxes and give the message to the boy first on the ground. This practice is understood by the boys and they race for the prize. Recently such a call was responded to by two messengers who reached the Monadnock building and dashed into the entrance at the same instant. They reached the elevator simultaneously, were carried to the ninth floor and managed to squeeze through the door abreast, starting "toe to toe" for the office at the end of the corridor. Down the hall they dashed with a speed which the elevator man afterward described—with reference to their uniforms—as "a streak of blue and a streak of gray."

The floor of the hallway was slippery and their speed so great that their attempt to stop short was futile, and the impetus of the foremost carried his outstretched arm through the glass of the door, shattering it in pieces and cutting severe gashes in his hands and face. As the surgeon finished the stitches in the boy's wounds he looked up with a pathetic triumph in his face and exclaimed: —

"But I got the message!" That is the true and typical spirit of the whole messenger force!

NEVER SAY FAIL

Another incident shows how the messenger boy makes good the peculiar opportunities which his daily tasks put in his way, forcing himself upon the attention not only of his employer but of the business men with whom he is brought in contact. In the course of the World's Fair an unusual number of boys were given employment as messengers, and among the new recruits was a keen but quiet little lad who instantly grasped the serious importance of his task. One Saturday he was given a message for delivery to a manufacturer at the latter's home on the West side of Chicago, several miles from the office at which he was stationed. He was given two street car tickets only and was not instructed that there was any particular urgency in the delivery of the telegram. But he had his own ideas on the latter score.

Several hours passed without his return and the "Chief of Delivery" became so annoyed at the prolonged absence of "No. 20" that he stormed and said many harsh things about the delinquent. As hour after hour passed without any sign of the boy the clerk's anger turned to anxiety and he became fearful that the youngster had met with an accident. About sundown a weary and bedraggled little figure entered the messengers' door. It was "No. 20," and as he turned in his delivery sheet he found scant voice in which to remark: "Say, I'm dead tired! Oh, but I had an awful chase after that man. Got out to his house an' the girl said he'd gone fer a fambly picnic out t' Garfield Park —she thought out t' furder end. I got her t' tell how many of 'em they was, an' what they looked like, an' the kind of lunch baskets they carried. Then I hoofed it out there an' looked the ground over till I found th' party—all but the man. He'd gone down t' his exhibit t' th' World's Fair. Say, but that grub looked fit t' eat! But the woman didn't make no mistake an' offer me none! She told me what exhibit he was at in Man'fact'res Building an' I put out fer there. Caught a ride on trucks an' express wagons part th'

way, sneaked some on th' trolley an' grip an' walked th' rest—'cause y' see I didn't have no tickets 'r fare. Had t' go clean t' th' fur end of the grounds 'fore I c'd get a fair chance t' climb that high fence without bein' picked by th' copper. I leaned a board up an' made the raise all right. I'd never been inside the grounds before—awful big place, too!—but I found the building an' the man. When I told him what a chase I'd had he give me a dime. I blowed a nickel fer red hots when I got outside an' rode back on th' rest of it."

The man to whom this message was delivered related the incident to a prominent Board of Trade broker, who sent word that he wished to hire the boy. I told him the account of the experience which the boy had given, and the plucky, determined messenger was given a good position at once. Now he is one of the brightest traders in the wheat pit, and stands an excellent chance to become a successful commission merchant.

A Boy's Midnight Adventure

A lesson immediately learned by the messenger recruit is to take the world as it comes, without shrinking or flinching, and to face hardships of weather, fatigue, and discouragement with fortitude and indifference. This builds good business "backbone" faster than any other kind of training. Few persons realize the severity of the demands which are made upon the messenger boy who is compelled to start out in the roughest weather and take his run as bravely as in the sunshine. In the dead of night and the small hours of the morning he beats his way about the city when "owl" cars run infrequently and he must travel afoot long distances in the darkness. The recollection of a certain twelve-mile tramp, in the darkest hours of night, measuring by short footsteps the distance from St. Louis to Carondelet, is too fresh in my memory to allow me for an instant to lose sympathy with the perils and hardships of the messenger boys. And the perils which these business men in miniature face

are not by any means imaginary. The memory of a midnight run when two highwaymen held me up and took from me the revolver which had been forced upon me by the night clerk, together with all the change in my pockets, enforces this point from the viewpoint of experience. In my terror the weapon was wholly forgotten until the robber drew it from my coat!

Quick reading of human nature is still another vital business trait peculiarly fostered by this fundamental branch of the telegraph service. No accomplishment is more valued by the man of affairs than is this quality of being able instantly to form a sound first-hand judgment of men and motives, and the messenger boy is forced, by swift and hurried contact with perhaps a score of men each day, to leap at conclusions and act on intuition.

"Flagging" Unwelcome Visitors

One bright little fellow attracted my attention and I selected him for the position of doorboy. After a day when the pressure of business had been unusally intense, and when I had been suffering not a little, this lad voluntarily ran to the dressing closet and brought my coat. With eyes full of ingenuous sympathy and earnestness he glanced into my face and remarked:—

"We've had 'n awful busy day, haven't we, sir?"

I repressed the smile which rose to my lips and answered as seriously as possible:—

"Yes, Michael; it has been a hard one. We must have had fully fifty callers."

"More 'n that, sir," was his quick and proud reply. Then a touch of mingled pride and pity came into his voice as he added: "But you ought t've seen how many I flagged!"

Intuitively he had understood the strain and pressure of the occasion and on his own initiative had sifted out the important callers with the tact of a born diplomat, referring the others to my assistants. This he called "flagging."

That boy has pushed ahead and will have a secure place in the business world. He, like the majority of his little comrades in uniform, had been so aroused and sharpened by contact with the rush of "the strenuous life" that his mental focus was marvelously acute and he could "catch on" to a situation with an instantaneous grasp.

The average business man is seldom too busy to notice the boy, and the telegraph messenger boy is persistently "bobbing up" at the elbow of the man of affairs to be noticed. If the lad is especially bright, courteous, alert, and observing, the banker, merchant, commission man, manufacturer, Board of Trade broker, or newspaper editor instantly acquires a personal interest in him, questions him concerning his individual history, takes a record of his number, and then offers him employment. A large proportion of the lads in this service contribute to the support of widowed mothers or other members of their families. They early learn what it means to carry the burden of family cares. This steadies their course and gives seriousness and direction to their character and career. Unless a city messenger boy starts out with an inborn fascination for telegraphy and a firm purpose to become an operator he is very likely, as I have indicated, to take advantage of opportunities offered him to engage in other lines of business. As a matter of fact, the greater portion of telegraph operators learn their art in small towns, where they start in as messenger boys, and where they are constantly within hearing of the click of the telegraph instrument. Advancement quickly follows after the lad has once mastered the rudiments of the craft. He is next transferred to another and more responsible place, but if he has the true telegraphic instinct he invariably gravitates to some large city.

Good Prospects

Young men can earn more money in the telegraphic profession than in any other line of effort when the years and experience which they bring to the business are considered. In five or six years, for instance, a fair operator can draw

a larger salary than he could command in any other calling after the investment of ten or twelve years of faithful apprenticeship. For this reason the telegraphic service, speaking from the viewpoint of the operator, has enabled thousands of intelligent and ambitious young men to earn a comfortable living for themselves and their families, while at the same time giving them leisure and opportunity to pursue studies in other business or professional lines. And the nature of the work itself trains them in the essential art of intense application and gives them a broad and comprehensive view of almost every line of commercial and professional effort and the methods of its operation.

While the work of the telegraph operator is exacting, his hours are short. What is still more important to the young man who wishes to support himself by telegraphic work and at the same time to apply himself to systematic study for a profession, is that he is usually able so to arrange his hours at the key that his day will be apportioned in a manner to meet the requirements and convenience of his outside studies.

There is seldom a time when the telegraph official in a metropolitan city cannot stand at the desk of the main operating room and in a single glance locate operators who are representatives of the professions of dentistry, the law, medicine, the ministry, and electrical science. Many talented young men drawing good salaries as expert operators are thereby enabled to give themselves thorough and extended courses in art, music, and a multitude of the higher and more æsthetic callings. Once mastered the telegraphic art is never forgotten, and the operator who leaves the vocation which has served as the stepping-stone to a profession is always conscious of the fact that, in case of emergency, he can "fall back on the key" and at once command a good livelihood.

It is my conviction that no other calling has been so productive a training school for other lines of business and professional effort as has telegraphy, and that, among men who have reached high positions in a wide variety of business and professional fields, there are more who can trace their

first advancement to the training and opportunities gained in telegraphic service than there are of graduates from any other "common school of experience."

The boy or young man who is ambitious to make rapid progress in the profession of telegraphy and to rise to a position above that of an expert operator may do much toward that end by a judicious course of reading and study. But in going into the theoretical side of business he should never allow himself to forget that practice at the key is the first consideration, without which he cannot obtain the two fundamental requisites: accuracy and speed.

Books for Young Operators

Easily first of the standard books which the young telegrapher should read is William Maver's treatise on "American Telegraphy." This is a meaty volume of some five hundred pages, which deals in a most comprehensive but very definite way with all phases of the telegrapher's art as it obtains on this continent.

Next in order I would suggest, the reading of "Telegraphic Connections," by Thom and Jones.

T. D. Lockwood's little volume on "Electrical Measurements" is essential to all who would gain a working knowledge of the craft.

No student of telegraphy can hope to obtain a broad view of his profession without a careful perusal of that sound and comprehensive treatise called "Modern Views of Electricity," written by Oliver J. Lodge, Professor of Physics in the College of Birmingham. This is a book of four hundred and seventy-five pages, and an assimilation of its contents will require many evenings.

The work of collected papers issued under the title of "Electrical Engineering Leaflets," written by Professor E. J. Houston and Professor A. E. Kennelly, will be found very helpful by those who wish to go into a home-study course in a thorough manner. This book is issued in three volumes for elementary, intermediate, and advanced stu-

dents. The beginner should go through the entire set. These papers treat of almost every phase of electrical work: power, lighting, the telephone, and the telegraph.

As indispensable to the intelligent study of these works I would include in the study course two reference volumes. The first is a "Dictionary of Electrical Words," published by the W. J. Johnson Company. The second is the book of plates and diagrams issued by the "Electrical Age," of New York, under title of "Illustrations and Descriptions of Telegraphic Apparatus."

BUSINESS, TRADE, AND INDUSTRIES

Farming as a Business

By Hon. JAMES WILSON

[James Wilson, agriculturist, was born in Ayrshire, Scotland, August 16, 1835. In 1852 his parents emigrated to the United States, and first made their home at Norwich, Conn., from which they removed in 1885 to Traer, Tama County, Iowa. He was educated in the public schools and at Iowa College. In 1861 he adopted farming as an occupation; but in the same year was elected to the State Assembly and became the speaker of the lower house. In 1872 he was elected to the Forty-third Congress, and was reëlected for the following term. He then ceased for the time to be engaged in active legislative politics, and served until 1883 as a member of railway commission. He was, however, returned to the Forty-fourth Congress, holding its session in 1883–85. From 1890–97 he was director of the Agricultural Experiment Association, and professor of agriculture at the Iowa Agricultural College at Ames. In 1897 he was made secretary of agriculture in President McKinley's cabinet, held the office throughout the McKinley administration, and was retained after the accession to office of Vice-President Roosevelt.]

IN discussing such a broad subject as the opportunities open to young men in American farming I shall have first to point out that agriculture in the United States (including in the term fruit raising and animal husbandry) is one of the most highly specialized industries I know of.

This is due, primarily, to two causes; the wide range of climate and soil in this country and the exacting requirements of American consumers, who want a taste of pretty much everything that can be raised on the earth. Hence we find producers in different parts of the country actively engaged at this time in raising a most remarkable variety of specialties, and it will be interesting to run over some of these for a moment. I am not referring now to the great

staple crops, the geographical limits of which are, in a broad way, well known, such as the cotton of the South, the corn of the Northwest and Middle West, the wheat of nearly all the states, and the like. Besides these, we are now raising cane sugar and rice in Louisiana, pineapples and oranges in Florida and California, tea in South Carolina, beet sugar in practically the whole northern tier of states and elsewhere, and tobacco in ten or a dozen widely separated regions.

Mushrooms are beginning to receive attention in many places near large cities; the Angora goat, raised for the sake of its fine hair, promises well for mountainous regions; the date palm will probably flourish in Arizona; the genuine Smyrna fig is succeeding in California, and olive-growing is now a well-established industry in the latter state. Then there is truck farming along the Atlantic seaboard, hop farming in the Northwest, irrigation farming (a promising field) in the semi-arid portions of the West, and cattle feeding on the ranges.

STUDY THE CONDITIONS

These are enough to show that farming in the United States is a business of great possibilities. I should think that the very first thing to be considered by a young man who contemplates adopting farming as a life work would be what crops can be successfully raised in the part of the country in which his lot is cast. Then let him consider his markets; what do they demand that he can most profitably supply?

Various considerations will sway him in settling these points, such as his nearness to market, the kind of labor he can depend upon, the particular class of farming that he likes best, social connections, and other circumstances.

Only very broad general principles can be laid down for his guidance in these matters. I would venture to say that if he is located near any of the great cities of the country his best chance for a profitable business lies in supplying the table luxuries of which a large population consumes such

incredible quantities. Remoteness from such markets will sometimes (not always) render what may be called a less intensive kind of farming more profitable. It is intensive work in the one case, extensive in the other, and each has its advantages and disadvantages. The intensive farmer probably works harder for a longer period of the year than the extensive farmer, but he often makes more money per acre.

Then, of course, there are certain characteristics that will cause one man to succeed in farming while another with equal advantages will fail. I am inclined to think that many of the failures in farming would have succeeded no better in any other business. I am supposing that the young man now under consideration possesses the intelligence, industry, steadfastness, and sobriety which are fundamental factors of success at any kind of work. Businesslike habits are essential. I would not impose on a busy farmer the keeping of an elaborate set of books, but some simple form of accounts will be a great aid in successful farming. As the farmer grows older, if he is able to secure, as he should, more time for experimenting and observing, he will find his records of crops planted, crops harvested, successes and failures, even if that record be a brief and simple one, of inestimable value in reducing his knowledge to exact and valuable shape. Then a businesslike way of handling his crops when the time to market them comes will be many dollars in his pocket. What would be thought of a business man who sent out imperfect or damaged goods with his name branded on the packages, or who sold fine goods in dirty or broken packages? Yet these faults are commonly found in the shippers of fruits, vegetables, and eggs. Another common fault is in not maintaining one standard quality in whatever the farmer has to sell. Is he a maker of fine butter? Let him never sell a pound that is not up to the highest standard. Have his packages of fruit attained a good reputation for quality and full measure? Let him see to it watchfully that no imperfect fruit and no short packages ever go to market under his name or brand.

The Successful Farmer's Education

In farming, as in most other pursuits, success is greatly aided by a well-directed education—in fact I know of no business in which education is so important. I do not mean to deny that many farmers have succeeded in spite of lack of scientific education; I know very many who have achieved a solid success, but they did it by means of their natural ability and strong common sense, fortified by years of experience and observation. They would have been greatly helped by a scientific knowledge of the reasons for the methods which they followed with practical success.

Of all the things which it is essential for the young farmer to understand thoroughly I should be inclined to regard as first in importance an accurate knowledge of the soil he works in. Now this implies a good many things. Does he know in what elements of plant food the soil of his farm is lacking, and what he should do to supply them? Does he understand its physical texture well enough to know where to drain to the best advantage? Can he restore fertility to a worn out field? Does he know which elements of its food the plant gets from the air and which from the soil? These considerations seem elementary, but as a matter of fact nothing is more common in American agriculture than deficient knowledge along this line, resulting in running down fields, or at least diminished crops. I have seen some of the abandoned farms of New England, and I am convinced that wrong methods of farming account fully for their present condition. Moreover, I feel reasonably certain that with the adoption of proper methods of farming these same abandoned lands can be made fertile again and support families in comfort. Consider what an advantage the owners of such farms would have in their proximity to great city markets. They only need intelligent handling by industrious farmers to be changed from abandoned farms to prosperous ones.

NATURE-KNOWLEDGE PAYS

The young farmer will be powerfully helped by a preliminary study of the soil and its elements in at least maintaining the fertility of his acres, though he should aim at increasing it if possible. His agricultural education, however, should not begin and end with a knowledge of the soil, important as that is. Is he intending to be a dairy farmer? Let him study the bacteriology of milk; know what causes the "ripening" of cheese; what breeds of cattle are best for his purpose, and what ration will produce the most milk at the least cost. If he has chosen fruit raising as his specialty, he must know enough of entomology, plant physiology, and plant pathology to recognize insect and fungous pests when they make their appearance on his fruit trees and how to treat them. The necessity for fighting insect pests that lies heavy on the raiser of fruits is often considered a great drawback to the business, but in another point of view it is not an unmixed evil. It compels the horticulturist to give constant and unremitting attention to his trees and vines, impels him to study methods of prevention and cure, and has actually resulted, in some fruit regions, in positive benefit to the industry.

Fortunately facilities exist in every state in the Union for acquiring just such an education as I have outlined so imperfectly. The "land grant" or agricultural colleges endowed by Congress in all the states furnish an education in all the sciences that relate to agriculture that cannot but be of inestimable value to the young men who secure it with the intention of making farming a life work. These land grant colleges do very good work for the young men and young women who have reached college age, but I would like to see the work begin earlier. I have long advocated some form of instruction in elementary agriculture in the common schools, and I am glad to see that something is now being done in this direction by more than one of the states. If children could be led by competent teachers in

the district schools to take an intelligent interest in the plant and animal life around them, and taught the relations of Nature to the practical work of their farm homes, I am inclined to believe that there would be less talk than there is about "boys leaving the farm," "the overcrowding of the cities," and the like. Boys would, in my opinion, receive under such instruction an impetus toward the farmer's life, rather than away from it.

One word more on the subject of the farmer's education I would like to say, and it is this: It may well be theoretical, but it *must* be practical. The agricultural colleges recognize the importance of this, and put their students through courses in which theory is tested and supplemented by the actual doing of the thing theorized about. The student of dairying handles the milk and cream himself, tests them for butter fat, makes cheese, and studies the "points" of cattle in the live animals.

THE GRUMBLING FARMER

In spite of the advantages of their occupation there is considerable discontent among farmers, many of them complaining bitterly of the drudgery and isolation of their lives and the small financial results obtained. It must be remembered that we do not hear complaints from the successful farmers, and possibly agriculture as a business is not to be blamed for the dissatisfaction that exists among others. Certainly the farmers have little cause for complaint this year. Unquestionably the percentage of failures among farmers is very small compared with the percentage of failures among merchants. Moreover, farmers are apt to forget, in estimating the returns for their labor, to include the farm products which are consumed in their own households, yet this factor ought of course to be counted in estimating results.

The complaint that farm life is dull and isolated has, perhaps, more foundation than any other that farmers make. Yet the removal of this drawback rests largely with the

farmers themselves. Coöperation and association for a great variety of purposes now serve to bring country people together and afford opportunities for social intercourse of a very pleasant kind, and these opportunities will multiply as time goes on. The improvement of our public highways, now so widely agitated, will help immensely to lessen the loneliness of country life by making intercourse between neighborhoods easier and pleasanter. With better roads, the leisure time of winter may be better utilized than it now is, and associations of all kinds for agricultural and social ends will doubtless grow in numbers and influence.

Taking the question "by and large," then, I think it is a safe conclusion that, while farming has its drawbacks, it is yet a reasonably safe, reasonably profitable, and highly interesting occupation for a man blessed with a real love for Nature, endowed with common sense, and equipped with some knowledge of, and a taste for, the sciences that underlie the business of agriculture.

BUSINESS, TRADE, AND INDUSTRIES

The Young Farmer

By F. A. WARNER*

THERE is no event in life of so much importance as the choosing of the business of life. That time comes, or should come, to every young man, and to many it is a source of much anxiety. It is a step well worthy of his very best thought and his most careful decision.

Self-reliance, ability, and energy are three requirements for success in any vocation. Without these any success achieved is more a matter of chance than a reward for correctly directed effort. An earnest desire to succeed, with a keen appreciation of the difficulties and obstacles to be surmounted, yet with a firm determination to attain the desired end by one's own effort, honestly applied, is half the success, attained already.

As a rule, wealth unearned by his own brain and hand is more likely to be a curse than a blessing to the average young man. Rich men's sons who can get money for the asking, with no thought of giving any value in effort for it, are not our best citizens, nor is society benefited by their example. Sons making the right use of inherited wealth are the exception and not the rule.

There is an immense attraction in the sudden acquisition of wealth. The idea of getting rich at thirty-five or forty and using the rest of one's life in spending the money is

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firmly rooted in the mind of the average young American. He first sets a mark of perhaps $200,000 as the size of the fortune he wants, but if able and fortunate enough to secure that amount he immediately sets about doubling it, and then, if he follows in the usual course, he not only fails in the new effort but loses all he had first won, and is rarely able, afterward, to gain more than a mere livelihood.

In these days there is too much plunging and not enough conservatism, too much venture and not enough caution, too much trickery and not enough honesty, too much self and not enough thought for one's neighbor.

In the consideration of agriculture, which I think is an ideal business, I want the reader to follow me for a few minutes while I describe the ideal young farmer engaged in the real business of farming—a description made from the standpoint of studied and careful observation and of practical work for a period of over fifty busy years.

MUST READ HARD

Starting out with the assumption that the young man was raised on the farm with only moderate country school advantages, with possibly a winter or two in some city academy, I should advise him to attend, if possible, and even at some sacrifice, the College of Agriculture and the Experiment Station of his state. He should take up especially the study of soils and their adaptability to produce certain varieties of product, and the study of the proper preparation, cultivation, and preservation of field crops, the care and feeding of stock—both for beef and dairy—and also swine husbandry. Even winter terms at such a college will add an interest to farm work and will greatly aid in explaining the various problems which arise to puzzle the farmer. The principles taught in these State Agricultural colleges are broad in the scope of their work and are exceedingly helpful.

If, however, the privilege of attending such a college is denied, I should advise a young man to spend as much of

his time as possible in the deliberate, thoughtful reading of some selections from the following list of publications, nearly all of which can be obtained from the Orange Judd Publishing Company, New York or Chicago. For a general survey of agriculture: "First Principles of Agriculture," by Vorhees; "Principles of Agriculture," by Professor L. H. Bailey, of Cornell University; "New American Farm Book, Revised and Enlarged," by Lewis F. Allen. These all treat of general farm matters in detail.

"Fertility of the Land," by Professor I. P. Roberts, discusses soils and their composition, and remedies for the renewal of lost fertility. "How Crops Grow," and "How Crops Feed," by Johnson, are excellent for study and reference. "Soil and Crops of the Farm," by Professor George E. Morrow, is a carefully compiled work relating to the most approved methods of making available the plant food and to methods of cultivation, and it pertains more especially to the great grain-growing and stock-raising Western States. "Land Draining," by Miles, gives most complete directions regarding open and tile drainage, and it is well illustrated. "The Book of Corn," compiled under the direction of Herbert Myrick, is an invaluable book for the corn grower. The enthusiast on corn would be greatly interested also in "Indian Corn Culture," by Professor C. S. Plumb; "Corn Plants, Their Uses and Ways of Life," by F. L. Sargent, and "Manual of Corn Judging," by A. D. Shamel.

All the crops grown by the farmer are more or less subject to insect pests or diseases, and "Insects and Insecticides," by Weed, and its companion, "Fungi and Fungicides," by the same author, treat of these matters very comprehensively.

"Weeds and How to Eradicate Them," by Thomas Shaw, ought to be in every farmer's hands and should receive his earnest attention. "Breeds of Livestock," by J. H. Sanders, editor of the "Breeder's Gazette," gives an exhaustive treatment of the distinguishing characteristics of the various breeds of farm animals.

As for specialties, there are "Swine Husbandry," by

F. D. Coburn; "American Dairying," by H. B. Gurler; "Shepherd's Manual," by Henry Stuart; "Youatt and Spooner on the Horse," and "Wright's Practical Poultry Keeper"—all of them interesting and instructive.

"Feeds and Feeding," by W. A. Henry, is a standard work and modern in every respect. "Diseases of Horses and Cattle," by Donald McIntosh, should be owned by every stockman and carefully studied so that he may be ready to make prompt use of the suggestions and remedies when needed. "Silos, Ensilage, and Silage," by Manly Miles, tells how to build and fill silos and feed silage.

It would certainly be only in keeping with advanced ideas in farming to buy the young wife "The Woman's Manual for the Household." This book is a veritable directory for the thousand and one things indispensable to know in a well-regulated household. "The Practical Fruit Grower," by S. T. Maynard; "Gardening for Young and Old," by Joseph Harris, and "The Beautiful Flower Garden," by Mathews, would all add to the comfort and pleasure of the farm home if read and heeded. I have also read with interest and profit "Clover Farming," by Henry Wallace, and "Horse Useful, and Forage and Fodders," by F. D. Coburn.

These books are only a few of the general agricultural works. I have sought to cover in a general way the leading industries on the farm. There are a great number of books discussing specialties, and any of them can be obtained through the agricultural publishing houses.

I should recommend the reading, first, of such of these books as treat of matters connected with the young man's immediate work on the farm, and those which relate most directly to his particular surroundings. If he is to start as a strictly grain-raising farmer he should read those works which most fully relate to that subject. If he is to be a stock farmer then let him read the works treating directly of that subject.

The ideal young farmer is the one who will heed the helpful suggestions to be found in the reading of most of the

books mentioned. In them will be found the results of years of research and experiment, and if he will make use of the knowledge he gains in their reading it will set him in the forefront, ready equipped to do battle in his chosen business and to gain a signal victory. Accompanying this reading there must be keen observation and the desire to verify the statements of the authors by actual trials under his own eye.

HIGH FARMING, PLAIN LIVING

The young farmer should determine to be the very best farmer, and then he should use every honest endeavor to attain that mark. Such a determination is inconsistent with speculation and with going into extremes in anything. Own about the same amount of stock; plant about the same acreage of corn and oats, the same amount in pasture, in meadow, in fruit, in garden; arrange for the rotation of crops and conserve the fertility of the soil by sowing clover, by carefully preserving and spreading all manure, by keeping as much stock as will consume all the "roughage" grown and will make return to the land through manure.

I would have him start with economy in mind. Buy those things *necessary to do the work. Do not run in debt. Pay as you go.* Notes are easy to *sign* but hard to *pay*. And there is no independence so enjoyable as that which comes from "Owe no man anything but the love you owe a fellow-being." I should want him to keep right on with the special branch he chooses—not changing from one kind to another like a farmer I knew, who, seeing his neighbor have a fine crop of oats one year, planted nearly all his farm to oats the following year. Oats were poor and corn was better. Then he tired of oats and planted nearly all corn; and corn was not so profitable as hogs, and so he turned to hogs for profit, and when he was well stocked the hogs nearly all died of cholera. The neighbor who had followed the plan of having about the same amount of each product each year had done very well, for the reason that, having a

variety of products, some one or more of them were of the profitable kind.

Our ideal young farmer must be a man of courage. Any disappointment, or any failure to accomplish the end he desires, should be the means of giving him a knowledge of things to avoid and of things to cultivate with greater care.

Follow Business Methods

He should, moreover, be a man of method. Every hour of every day should count for something. The movements of the body in doing work are entirely under the direction and control of the brain. The knowledge stored in the brain, therefore, should be of such a nature as shall seek to economize the strength of the body, bringing into the best use those parts of the body needed to do the work with the least waste. Many farmers are looked upon as great workers because they seem to be always in a hurry. They rush here and there, or pick up this article and drop that, and their useless movements are greatly in excess of the useful.

I call to mind a good-natured, strong, German farmer who was one of these hard workers. He was always up early in the morning. He would hurry into the field to plow —only to find that he had left the whippletrees at the house, having used them on the wagon the evening previous. He could pitch more bundles of oats upon a wagon in the field than could most men, but would do it in such a manner that the wagon rarely reached the stack or thrasher without a reloading. He was the same with all work on the farm. He had been twelve years a renter and was likely to be a renter for twelve years more.

By the proper care and use of the body health can usually be conserved and life really prolonged. The eating, sleeping, resting, and working should be so controlled as to preserve the proper healthy equilibrium. I cannot pass this point without the remark that the use of liquor and tobacco has a direct tendency to weaken brain, nerve, and muscle, and to cause an early collapse. I should like to see my

ideal farmer have a sufficient amount of pride to appear at any time and place well clothed and in his right mind.

I would like him to know just what he is doing, financially, from year to year, and for keeping his accounts he should obtain a book with what is called "journal ruling." About two hundred pages will last a long time. He should open up the following accounts: Eighty-acre piece of corn, eighty-acre piece of oats, thirty-acre piece of wheat, sixty-acre pasture, sixty-acre piece of meadow, ten-acre piece of orchard and garden. Charge against each piece the seed furnished and all work done and the acreage proportion of repairs, taxes, insurance, etc.; and when a crop is harvested credit to the proper account the produce obtained. Also open an account with horses, cattle, hogs, farm machinery, and an expense account. Charge the stock with their feed, the farm machinery with the tools bought and their repairs, and the expense account with the items of expenditure not enumerated in the other headings. Credit horses with the work done and with money received from any sold. Credit cattle and hogs with increase, or with money from sales made. Credit farm machinery with the use per acre. It will take only a few minutes at evening to make the proper entries, and thus at any time the farmer can take an inventory value and find how he stands. Things which, as the book shows, do not have a balance on the credit side can be abandoned, and those which show a good credit can be increased.

The above is only what any man in any mercantile business always does, and as farming is just as much a business there should be account books to show what is made or lost.

WHAT IT COSTS TO BEGIN FARMING

If our ideal young farmer shall be so fortunate as to own the necessary teams, tools, seed, and live stock for a one hundred and sixty acre farm, and should further be so fortunate as to own the land, too, that land to be situated in the central part of the State of Illinois—if he shall be industrious

and frugal, with a helpmeet of like mind, shall be the thorough farmer that we should wish him to be, then I should place him a little above the average farmer in production, and, allowing all things else to figure upon the average prices obtained for the past thirty years, I should expect his book of accounts to show the following entries as nearly as may be. If he started with new things his inventory account at the start would be as follows:—

1 riding plow	$ 37.50
1 three-section harrow	15.00
1 disk, 7½ feet cut	24.00
1 corn planter and check-wire	33.00
1 oats seeder, 11 feet	16.00
1 riding cultivator	22.00
1 walking cultivator	15.00
1 farm wagon	55.00
1 mowing machine	40.00
1 hayrake	20.00
1 harvester, self-binder	120.00
1 hayrack	7.00
3 sets work harness at $26	78.00
3 horses (geldings) at $110	330.00
3 brood mares (2 in foal) at $130	390.00
4 cows at $40	160.00
4 steers and heifers, 2 years past, at $35	140.00
4 yearling heifers and steers at $20	80.00
4 calves, heifers and steers, at $8	32.00
2 brood sows, 250 lbs. each, at 4½c. lb.	22.50
4 doz. poultry (44 pullets, 4 cockerels) at $3 doz.	12.00
Furniture and household supplies	200.00
Seed corn, 12 bu. at $1	12.00
Seed oats, 125 bu. at 32c.	40.00
Feed for six horses, March 1 to September 30, 168 bu. corn at 35½c.	59.64
168 bu. oats at 29½c.	49.56
Hay for four months, 1¼ tons each, 6 tons at $5	30.00
Feed for 2 brood sows, 4 months, 10 bu. corn at 35½c.	3.55
Total,	$2043.75

Hence our young farmer must have about $2,000 in money to make the above purchases in order to start farming and be what we call fully equipped to do good work and produce the best results. He might start with considerably less equipment, but it would be at the expense of much more labor, and in the exchanging of work with neighbors there would be possible neglect of his own fields and a consequent

less production and a slower accumulation of profits. I believe that our young farmer could safely start farming if he had $1,000 in money to purchase the horses and tools needed to the close of corn cultivation; the other expenses could be provided for out of the earliest returns from the farm of the most salable products.

The First Year's Dividend

We shall now still further show what entries, debit and credit, should be made in his book of accounts. The one hundred and sixty acre farm would produce per acre as follows:—

70 acres in corn, 50 bu. an acre, 3500 bu. at 35½c.	$1242.50
50 acres in oats, 45 bu. an acre, 2250 bu. at 29½c.	663.75
16 acres in hay, 1½ tons an acre, at $5 per ton	120.00
20 acres in pasture, to graze cattle; increased value, 8 head unsold	120.00
4 acres in garden, orchard, and roads, etc.; produce worth	25.00
Sold 4 head cattle, coming 3 years old, at $50	200.00
Sold 10 head hogs, 250 lbs. each, at 4½c. lb.	112.50
Sold 2 brood sows, 400 lbs. each, at 4½c. lb.	36.00
Sold 6 doz. chickens at $3 doz.	18.00
Sold 100 lbs. butter at 15c. lb.	15.00
Sold 250 doz. eggs at 12c. doz.	30.00
Total,	$2582.75

In addition to the above he has on hand of increase stock:—

6 calves at $10	$60.00	
2 brood sows at $9	18.00	
2 colts at $20	40.00	
6 doz. chickens at $3 doz.	18.00	—136.00
Total,		$2718.75

What His Expenses Will Be

His expense account will be about as follows:—

1 hired man, 9 months at $20	$ 180.00
Extra help—harvesting, thrashing, husking, etc.	50.00
Help in the house, sundry busy times	30.00
Feed for horses, hogs, cattle, etc., 400 bu. corn, at 35½c.	142.00

Feed for horses, 150 bu. oats at 29½c.	44.25
Feed for horses and cattle, 9 tons hay at $5	45.00
Thrashing bill, 2250 bu. oats at 1¼c.	28.12
Shelling 3100 bu. corn at ¾c.	23.25
Board hired man, 9 months at $10	90.00
Board hired girl, 3 months at $10	30.00
Board extra help, visitors, etc.	25.00
Groceries, dry goods, clothing, shoes, etc.	250.00
Miscellaneous, unprovided above	20.00
Wear and repairs on all tools, 10 per cent.	38.00
Total,	$ 995.62

This would leave net for him $1,723.13, being the product of his labor and investment. This would be six per cent on $80 per acre, and nearly $1,000 to save or to invest in more stock and improvements.

If our young farmer should start on a rented farm his expenses would be about the same; and if he should pay cash rent of $5 an acre he would have $923.13 profit. If he will cut up some of his corn before frost, and if he will carefully stack his oats and straw and properly house and paint his farm tools, his expenses can be considerably lessened and the rough feed used to save grain and hay, with a possible surplus of fruits, potatoes, melons, etc., to sell.

Careful rotation with clover sown in the oats, the persistent spreading of the manure made, and the timely doing of the seasonable farm work will increase his income as the years come and go.

The Most Profitable Farm Acreage

I should not advise any young man in the western country to try to get rich upon an eighty acre farm. It may do to start with for a year or two, but it is too large for one man to work with success, and too small in product to justify buying the tools and employing the help to do good farming. Only in fruit farming or market gardening, or in the two combined, would that size farm pay. On half section farms he would do proportionately better than on one hundred and sixty acres, but must have the necessary experience to be gained by two or three years on one hundred and

sixty acres, and when he has a large farm of from 1,000 to 1,280 acres he must have the capacity and ability to manage the work of his men to the best advantage and should be a thorough stockman, breeder, feeder, and seller, and an earnest student of the rotation of crops, as it is now quite well understood; and on any size farm he must know intimately the How, Where, and When of all things pertaining to his chosen business.

I would not have our young farmer neglect the social functions prevailing in his neighborhood, only I should advise that they be of such a character as shall in no instance have a tendency to belittle the dignity of his position. I realize there must now and then be some relaxation and diversion from the day by day duties on the farm. I think the Grange meetings, the township farmers' clubs, the farmers' institutes, and the various farm and live stock associations serve both to divert and educate, if I may so express it. The exchange of ideas and opinions and the object lessons furnished are often of great benefit.

I would have our young farmer a leader in these affairs by reason of his superior knowledge of the matters to be discussed, secured by his agricultural college training or from the reading of some of the books referred to in this article.

THE YOUNG FARMER'S HOME LIFE

The home surroundings on the farm are of much more importance than is usually given to that feature. The arrangement of the buildings, for both convenience and health, is very important. Lack of shade trees and fruit trees gives an undesirable barrenness to a view. We repeat with reverence the line, "The moss-covered bucket that hung in the well." That sentiment did very well for our long-ago forefathers, but give us now the bucket that is so busy that no moss can cling to it.

The surroundings and interior of the farm home are indicative of the progressiveness of the owner. Let our ideal young farmer start out with the view of making the farm

home a fitting place for his chosen life partner, who, at least in the courting days, expected to reign over a home dominion to be pointed at with pride and pleasure. This young farmer should be a power in his neighborhood through showing an example of industry, honesty, ability, and good judgment. I would have him bear in mind that quality, as well as quantity, is to be considered in every transaction, both in buying and selling. He should always consider that "A good name is rather to be chosen than great riches."

The world wants live, progressive men, whose works will live after them as an example to succeeding generations.

Agriculture is taking its place in the world's progress, and is a science and a business worthy of the united efforts and the unselfish wisdom of the best men. May our ideal young farmer be one of these men. He can be if he will.

BUSINESS, TRADE, AND INDUSTRIES

Learning a Trade

By CHARLES FREDERIC WINGATE

[Charles F. Wingate, sanitary engineer, was born at New York City, March 5, 1848. He was educated in the public schools and at Cooper Institute, and in early life engaged in mercantile pursuits. From this he turned to editorial work, which he followed for twenty years. For five years he corresponded for the "Springfield Republican" under the signature of "Canfield." In 1883 he founded the Twilight Club, and, in 1887, Twilight Park in the Catskill Mountains. He is the author of "Views and Interviews on Journalism"; "What Shall Our Boys Do for a Living?" and "Twilight Tracts: An Episode in Municipal Government," contributed to five numbers of the "North American Review."]

A TEACHER once asked me with great earnestness, "What can our smart boys and girls do besides being lawyers' clerks and milliners?" My answer was, "Set the boys to learning trades." Yet the very same day a mechanic complained that the average young woman would sooner marry a "counterjumper" with $12 a week than a journeyman earning $3 a day. In Philadelphia an advertisement for a clerk brought four hundred and eighteen answers, while one for a wheelwright's apprentice received three. It seems a sad perversion of our educational system that so many boys consider it more "genteel" to run errands, sweep out offices, build fires, and copy letters, than to make hats or shoes, lay bricks, wield the saw or jackplane, handle the machinist's file or the blacksmith's hammer. A country which prides itself upon its industrial supremacy and inventiveness, which has produced such men as Franklin, Robert

Fulton, George Steers, Goodyear, Bigelow, Horace Greeley, the Hoe brothers, McCormick, Carnegie, Edison, Ericsson, Herreshoff, and Fairbanks should foster a sentiment that would lead the rising generation to rival their achievements.

The great mass of the builders and contractors whose work is seen in the monster hotels, apartment houses, office buildings, theaters, and churches, erected all over the country, have risen from the ranks. Most of them have worked as mechanics and some even as laborers.

Mr. See, the author of "Chordal's Letters," a practical mechanic and expert engineer, writes in the "American Machinist": "If you know of a bright sixteen-year-old boy, smart and independent, with snap, pride, poverty, good health, and a common school education, and with a hankering after the mechanical arts, tell him to go into a machine shop and learn the trade.

"Is there no show for machinists? Turn to the last pages of this paper and there read the biography of the workingman. The advertising pages tell the tale. Sixty men put their names on those pages. They employ five thousand workmen and over $6,000,000 of capital. Were these sixty men born with these millions in their pockets? Did they fall heir to the cash and the shops at an early age? Not a bit of it. At the age of eighteen over forty of these men were working in shops."

James Nasmyth, the inventor of the trip hammer, was the son of an artist, who was also an amateur mechanic. He was thoroughly trained, both as a draughtsman and in the use of tools. When he visited Henry Maudslay in London and desired to be taken as an apprentice, he was at first rejected, but upon showing his drawings and specimens of his mechanical skill he obtained admission, not as an apprentice but as Mr. Maudslay's personal assistant. This was the foundation of his after-success. Thousands of other mechanics who began with no help but a stout heart, a clear head, and a dogged determination to win success, to-day are respected members of society.

The Talmud says: "He who teaches not his son a trade

is to be regarded as if he had taught him how to rob." In ancient times even kings were required to learn trades, so as to be self-supporting in case they lost their crowns. In 1894 Robert Louis Stevenson wrote: "Were it not for my health, which made it impossible, I could not find it in my heart to forgive myself that I did not stick to an honest, commonplace trade when I was still young, which would have now supported me during all these ill years."

No calling should be avoided because it may not seem genteel. Surgery, once a function of the medieval barber, is now a most dignified and highly paid profession. So with dentistry, pharmacy, and veterinary surgery, which rank far higher than any one dreamed of a generation ago. Within that period also the much-abused plumber has become a sanitary engineer, and the tinker is now a man of standing. The express business and newsdealing have grown from humble occupations to be great industries. The family nurse is the graduate of a training school. Even New York street sweepers, since they were uniformed, have gained dignity and public respect.

It is high time that our boys should be brought to face the fact that the commercial world is overstocked. An ordinary clerk is not so well paid as a first-class mechanic. He has far less independence and not half so good prospects. The mechanic's work is more healthful; he is less likely to lose his place in dull times, is only discharged from necessity, and has equal chance of promotion. The average clerk does not require special ability, but a mechanic must be intelligent, and, if he is industrious and observing, he improves daily. Machinery has often cut wages and thrown workmen out of employment, but immigration has displaced thousands of clerks. A mechanic with a kit of tools and enough money to hire a basement or a loft may start on his own account, or he may work at home. If he has energy and makes friends he will have little trouble to get along. I believe that more mechanics than clerks own their homes, they enjoy more comforts, and when they die they leave their families better provided for.

Here are a few examples of boys who have succeeded in trades. A New England mother had a son who threatened to become wild. A friend advised putting him in a machine shop. The boy in time became superintendent and finally married his employer's daughter. This is an exceptional case, yet, when I see scores of young men with gifts for construction and for administration, slaving at office work, I feel that their lives have been failures. A Southern editor had a son who shirked study, and was always visiting workshops and factories and bringing home sketches of machinery. His father, finding punishment useless, placed him at seventeen in a factory, where he was paid twenty-five cents a day. Five years later he was earning $80 a month as engineer on a sugar plantation. A second son studied shorthand for two years, but failed to succeed. His father then bought him a $20 printing press and now he is established as a printer. Neither of these boys would have earned his salt in a profession or as a clerk. A boy on a Jersey farm, the son of poor parents, studied surveying and mapped the farm. He then got a place with Edison, and before he was twenty-one was sent to Mexico to set up an electric light plant. There are scores of similar cases.

Of course a boy to succeed must have an aptitude for mechanics. General F. A. Walker said: "You can no more make a first-class dyer or a first-class machinist in one generation than a Cossack horseman or a Tartar herdsman. Artisans are born, not made."

But how shall the boy with a fondness for tools get started? The old apprenticeship system has disappeared. In certain trades a limited number of boys are admitted, but it is nobody's concern to teach them, and they make slow progress. Horace Greeley said: "To make an editor you must catch him young and feed him on printer's ink." Manual dexterity can only be acquired in youth. Professor Adler favors giving manual training in the kindergarten and thus preparing the boy to enter at once on his trade. Before long we may hope to see manual instruction, instead of the many useless things now in the curriculum, taught in the

public schools. If a boy on entering a shop has some idea of the nature of the materials used and of the natural forces which operate in treating these materials to convert them to practical ends, he will get along faster than if he lacks such knowledge. Hence the value of technical training.

The superintendent of a New York carriage factory has had unusual success in training beginners. He arranged with the principal of a public school to send promising boys to him. They were set at piecework, and in a surprisingly short time earned good pay and became serviceable. Within a few years he trained over sixty boys. One youth of eighteen could turn out the best work in his line made in the United States. Unfortunately few superintendents possess this talent. A man engaged in directing a large establishment has no time for anything else, and, besides, teaching is a business in itself. In the Hoe Brothers' printing press works the boys are taught systematically in night classes. Addison B. Burk states that in smaller towns and villages in Pennsylvania the old-time relations of the apprentice and master continue. The workshops of large cities are largely supplied with skilled workmen from these places.

Under the old system a beginner had to associate with rough, ill-bred, and often vicious boys, who were put to learn a trade because they were unfitted for anything else. An apprentice had to clean his master's boots, and, though he sat at the master's table, he often did not have enough to eat. In many trades boys used to do nothing but dirty work—cleaning, sweeping, or hammering the rust from old iron. Consequently they could not learn anything for a year or more. Now that machinery has shortened so many mechanical processes, it seems unjust that beginners should waste time in needless drudgery. Yet the natural desire of the beginner to avoid or hasten through the dirty-work period in a trade is opposed by masters and journeymen, who think that every one should pass through the same ordeal as themselves.

No sensible man would encourage squeamishness or a fear of soiling one's fingers. The doctor, the lawyer, and

the clergyman perform disagreeable service, but they do not complain. So the trade school graduate should be willing to do everything needed to qualify himself for his calling.

Foreign workmen, especially Germans, have better preparatory training than Americans, but they are less versatile and are apt to run in ruts. John Lafarge considers that a first-class American mechanic has no superior.

Complaint is made in most trades that boys will not stay long enough to learn anything. A boy begins with, say $4 a week, and after a few months he suddenly leaves to go into possibly an entirely different trade for the sake of another dollar a week. As a result the youth becomes a "half-baked" workman.

I once had as clerk a German-American boy of eighteen. He left school at nine, tended a shoe dealer's stand, worked in a laundry, then in a cigar factory, later in an office, and then as assistant steward on an ocean steamer. He never earned more than $5 a week and knew absolutely nothing. When set to copy a typewritten letter he wrote small i's instead of capitals. In addressing wrappers to leading American cities he could not tell what states they were in. It is melancholy to think of his future, as he was unfit for any position requiring training or brains.

I would strongly advise young men to become plumbers, in spite of the fact that most people disparage the trade. This is because, until lately, it has been monopolized by ignorant bosses, who have brought it into disrepute. A first-class plumber must understand both the theory and practice of sanitary science. He ranks with a machinist or engineer. Within a very few years the trade has been revolutionized, and there is a growing demand in all parts of the country for capable plumbers. A young man who is master of the trade has a great advantage over the ordinary, ignorant, unscrupulous plumber, and should have no difficulty in getting plenty to do. Not only is there a steady demand for new buildings in all parts of the country, but repairs and alterations are also going on continually, and the plumbers who can give satisfaction to customers easily suc-

ceed. One of them once told me he had not lost a week's work in thirty years. He said there were four men in his shop who received fifty cents a day extra because they could follow plans and specifications correctly, measure and order exactly what materials were needed, were able to explain clearly to customers just why certain things should be done, and could act with discretion in emergencies. Such practical sagacity and "gumption" count for much. The timid and indifferent workman who blindly follows orders when he knows they are wrong or need to be modified is the first to be laid off when work is slack.

An employer speaks of the difficulty of judging whether a boy is fitted to learn a trade. He describes two apprentices who were under training. One was a quiet, studious, good boy, fond of reading, of a neat appearance, could talk correctly about the business, yet he was a poor workman. After his time was out he never could keep a job. He finally went into another business and is doing well at it. The other was always in mischief, full of pranks, continually being complained of, but when he received a kit of tools and was set to work he was a success. He was not a reader, but had the knack of seeing into things or the cheek to ask about what he didn't know. To-day he is a good, reliable workman, earning good wages.

In "Chordal's Letters" a similar description is given of the difference between a boy made of putty and one with brains. "I was in the office of a certain engineer the other day, and a mutton-headed boy, about nineteen, came in. He was a machinist. His father owned a shop and he had served his time in it. He wanted to learn to 'draft,' he said. His father wanted him to learn; he wanted to learn himself, and his father would pay all reasonable bills. Torrson, the engineer, began to catechise him. 'What have you ever drawn?' 'Nothing!' 'What have you ever wanted to draw?' 'Don't know as I ever wanted to draw anything, and could not make a "draft" if I wanted to, because I never learned how.' 'That's all right,' said Torrson, 'you will never draught anything, and will never be wanted to.

home a fitting place for his chosen life partner, who, at least in the courting days, expected to reign over a home dominion to be pointed at with pride and pleasure. This young farmer should be a power in his neighborhood through showing an example of industry, honesty, ability, and good judgment. I would have him bear in mind that quality, as well as quantity, is to be considered in every transaction, both in buying and selling. He should always consider that "A good name is rather to be chosen than great riches."

The world wants live, progressive men, whose works will live after them as an example to succeeding generations.

Agriculture is taking its place in the world's progress, and is a science and a business worthy of the united efforts and the unselfish wisdom of the best men. May our ideal young farmer be one of these men. He can be if he will.

BUSINESS, TRADE, AND INDUSTRIES

Learning a Trade

By CHARLES FREDERIC WINGATE

[Charles F. Wingate, sanitary engineer, was born at New York City, March 5, 1848. He was educated in the public schools and at Cooper Institute, and in early life engaged in mercantile pursuits. From this he turned to editorial work, which he followed for twenty years. For five years he corresponded for the "Springfield Republican" under the signature of "Canfield." In 1883 he founded the Twilight Club, and, in 1887, Twilight Park in the Catskill Mountains. He is the author of "Views and Interviews on Journalism"; "What Shall Our Boys Do for a Living?" and "Twilight Tracts: An Episode in Municipal Government," contributed to five numbers of the "North American Review."]

A TEACHER once asked me with great earnestness, "What can our smart boys and girls do besides being lawyers' clerks and milliners?" My answer was, "Set the boys to learning trades." Yet the very same day a mechanic complained that the average young woman would sooner marry a "counterjumper" with $12 a week than a journeyman earning $3 a day. In Philadelphia an advertisement for a clerk brought four hundred and eighteen answers, while one for a wheelwright's apprentice received three. It seems a sad perversion of our educational system that so many boys consider it more "genteel" to run errands, sweep out offices, build fires, and copy letters, than to make hats or shoes, lay bricks, wield the saw or jackplane, handle the machinist's file or the blacksmith's hammer. A country which prides itself upon its industrial supremacy and inventiveness, which has produced such men as Franklin, Robert

attended the New York trade schools, an average of five hundred yearly. They come from all parts of the United States and Canada. Most of the graduates earn good wages. A number are master mechanics. Many of the pupils have worked in shops and sought to improve themselves in some special line. They make rapid progress, because they know just what they want to learn. The growth of the school is the best proof of its value.

Mr. Mundella said the graduates from the English technical schools surprise their friends by the high wages they get. One young man earned more than his father and two brothers. Dr. Edward Jarvis says: "Education increases the value of the common laborer because of the saving in supervision. The ignorant man merely imitates some one else so long as he is watched, but he makes blunders and is a great tax upon capital." To set a $5 man to direct a $2 man, is a waste of time and brains. The educated workman needs little supervision. On the other hand, capable men are kept from promotion by their inability to keep accounts. An intelligent mill hand will produce more, and will keep his machine in better condition, than an ignorant one. He is also less inclined to intemperance. By the testimony of workmen themselves increased skill and aptitude come from education, and the superior workman performs his work with less labor than his fellows.

It is not wise to tempt students by easy lessons. If technical courses are to be useful they must be thorough. Professor Baraff says: "It is useless for a person who knows a little chemistry or a little electricity or a little mathematics or mechanics to attempt to apply his knowledge to practical purposes." The youth who has worked in one shop only will appreciate his ignorance when placed in a larger establishment, and still more when placed in the technical school where all varieties of work are explained by competent instructors.

Not every one has sufficient resolution to sit down to his books after a hard day's work. Few persons also can study alone. They need the stimulus which comes from contact

with other students, and also the guidance of a trained teacher. Many mechanics have been greatly benefited by taking a course of one of the International Correspondence Schools, which seem to be admirable institutions.

Not every apprentice becomes a skilled workman. No more does every clerk become an Astor or a Stewart, or every law student an Evarts or a Choate. But that is no reason why manual labor should be condemned.

In trades requiring artistic talent, like cabinet making, wood carving, and lithography, foreign workmen take the lead, while in railroading, the machinist's trade, and plumbing, native Americans succeed.

What is especially wanted to promote our industrial future is to multiply the number of trained foremen and superintendents. A good general can make an army out of almost any material. So with proper superintendence a factory or a shop will turn out a far higher quality of work than without it.

A young man aspiring to be a mechanic should ask himself: Do I honestly and sincerely want to be a good workman and a credit to my trade and to my friends, or am I seeking only to make a living in the easiest and shortest manner? As Caleb Garth says in "Middlemarch," "You must be sure of two things: You must love your work, and not always be looking over the edge of it, wanting your play to begin; and the other is: You must not be ashamed of your work and think it would be more honorable for you to be doing something else."

The technical trade journals supply a fund of information. They are found in every workshop and in thousands of homes. Their effect in stimulating study and imparting new ideas is great and wholesome. Such journals as "The Scientific American," "The American Machinist," "The Metal Worker," "Carpenter and Builder," "The Iron Age," "The Railway Gazette," "The Shoe and Leather Reporter," "The Hub," "The American Builder," not to mention others, exert a potent and widespread influence. It is difficult to bring together the members of a certain trade

for mutual intercourse and discussion, even in a metropolis like Paris, London, or New York. The technical journal, however, like the telegraph, annihilates space and time, and joins the most distant individuals into a cohesive whole. The isolated artisan in some factory town or village, who reads the trade journals, feels himself linked by sympathy and self-interest with his fellow-craftsmen. The researches of investigators in special lines are brought to the attention of those most interested in them. The columns of these journals supply a vehicle for discussion and for advancing knowledge in every department of progress. They have become the only substitute for the ancient guilds. The same benefits which accrue from journals like "Nature" and "Art," have resulted from the technical and trade journals. The fact that they are so widely read and quoted is a proof of their value.

In "Chordal's Letters" there are some sensible remarks for mechanics on the subject of reading. "What books should machinists read? This question is asked of some one supposed to know, about a thousand times a year. Mechanics, as a general thing, are pretty well advanced in years when they want these books. They can't comprehend anything fine or deep or analytical, and cannot spend time to attain the necessary elementary book knowledge. They despise a book which treats them as children. Walker is a carpenter, and is patronizingly urged to go to the library and read up his trade and rise in the world. He knows nothing of books, and takes the first one with carpentry on the back of it, say, "Constructive Carpentry Practically Considered." He could not define the title to save his neck, but proceeds to look into it. He finds many demonstrations and geometrical diagrams, but he can't get into sympathy with the thing; says the author is a fool who couldn't shove a saw, and he puts the book away. He takes another, the "Complete Carpenter." On the first page he sees a villainous cut of a saw, and he reads: "This is a handsaw used by carpenters to cut off boards. It has teeth upon one edge. These teeth are about one-eighth of an inch apart, and are

bent alternately, slightly to the right and left. This bending is termed 'set.'" He puts this book away in disgust, and says, "The author thinks I am a fool who can't file a saw." Walker won't read one book and can't read the other. The book for him must be tailor-made, and must fit him exactly or he can't get any good out of it.

"The problem is perplexing, but there is one good thing about it. A thirst for knowledge will find its own means of satisfaction, and this thirst will never come upon a man in middle life. There is no boy so circumstanced in this whole land that a thirst for technical knowledge will not in a way develop and gratify itself before he is twenty. If there is anything in him, he will have formed an acquaintanceship with books in general, and need ask no questions relating to general direction of study. If such an acquaintanceship has not been formed, friends need hardly regret being unable to suggest a proper path of study. Of course such reading is mostly done and mostly appreciated by the young chappies who are priming for the future. If owners of shops will keep one eye open for such tendencies, they will find it an excellent index to character and a pointer toward an excellent plan of encouragement which will repay tenfold."

BUSINESS, TRADE, AND INDUSTRIES

Opportunities Old and New

By CHARLES FREDERIC WINGATE

BACON advised parents to choose their children's vocation "betimes," when the children are most "flexible," and not to lay too much stress upon their apparent disposition, unless the child has some extraordinary inclination or aptitude. In that case it is not good to cross it. It is generally wise to follow the Latin precept: "Select that course of life which is most advantageous. Habit will soon render it pleasant and easily endured."

A superintendent of a French school reports that of one hundred pupils six intended to follow professions, twenty-three preferred business, fourteen wanted public positions, and fifty-seven meant to learn a trade. The preference of American boys is very different. Two-thirds of the pupils in the New York schools take to business. The professions attract a number, while the trades find but little favor in the eyes of either boys or their parents.

The variety of occupations open to young men of the present day is shown by the statistics of four hundred and eight members of the Harvard class of 1898, of whom one hundred intended to study law, twenty-nine to study medicine, forty-five to teach, fourteen to become manufacturers, twelve to prepare for the ministry, and twelve to enter journalism. Later six became insurance and real estate agents, seven chemists, three brokers, two salesmen, seven merchants, four railroad men, four publishers, thirteen engineers,

six bankers, two landscape architects, and two contractors. Sixteen men continued their studies in the graduate courses, or abroad, and eighteen chose some form of business. Among the remaining members there were a biologist, a superintendent of schools, a commission merchant, two draughtsmen, three writers, a coffee cultivator, an iron founder, a musician, a geologist, an entomologist, a mining expert, a forester, a gas engineer, three soldiers, a dentist, a wholesale grocer, a dealer in live stock, an actor, an artist, and a missionary. At Yale, out of a class of three hundred, seventy-nine chose law, twenty-two medicine, eighteen teaching, and nine the ministry.

Most students do not decide what calling they will select until after entering college. This is advisable. It is better to feel one's way, consult with one's teachers, and compare notes with classmates before making a final choice. The first two college years are devoted to general studies, which give breadth and strength. If the student then decides on his future occupation he can shape later studies in any special direction.

In watching the throngs of young and old in the streets, or crowding the trains and ferryboats, on their way to work, I constantly ask myself: "How is it that these men can wear good clothes and live in comfortable homes? Is there any mystery about it? Is it luck or chance?" The simple answer is that the vast majority of the world's workers, leaving out of consideration the few drones in the hive of industry, gain food and clothing and shelter by earning them. Look at the shops lining every street. Is there any question how their owners draw customers? They do it by having something to sell that the public want, and presenting it properly to their attention. The same impression is made by studying the newspaper bulletins and bookstands, the theater posters, the doctors' and dentists' signs, the huge hotels and churches, which all teach the same lesson, namely, that to earn a living from the public you need to have something to give in exchange—food, clothes, luxuries, knowledge, news, entertainments, shoes or sermons, jewels or

gingerbread, potatoes or pianos, professional advice, or instruction in the arts. On Broadway, as on the Bowery, enterprise, taste, and skill in catering to the public bring their sure returns. The bootblack or the fruit peddler succeeds in the same way that the merchant or banker does: by sticking to his business, making friends of his customers, spending less than he earns, and supplying what the public wants.

Let every young man, therefore, dismiss from his mind all thought of getting on in life by any new or original methods, but decide that the beaten path which millions have trodden before him is the surest way to prosperity and reputation.

Our Golden Age

Every past age seems the golden age. It would be laughable, were it not so natural, to hear each generation bewail the departing "great lights" in each profession, and ask in dismay: "Where are their successors to come from?" It is the same in every occupation. When people say there is no opportunity for new men, I point to "The Century," rivaling "Harper's Monthly," and the rise in turn of "Scribner's," "The Cosmopolitan," "Munsey's," and "McClure's" magazines. As the New York "Times" grew beside the "Tribune," and was followed by Mr. Dana's "Sun," so the "World" forced its way to the front. Later the "Morning Journal" and the "Press" were established. "Puck" and "Life" have created fields for themselves, yet there is still room for others.

We do not consider the large sums of money which are handled in small amounts. The four and a half billion cigars yearly smoked in the United States represent, perhaps, a thousand million sales of a few cents each. The penny weighing machine has a clientele of seventeen million people annually. The automatic machines, which disburse chewing gum, postage stamps, and a dozen other trifles continually gather their harvests of cents and nickels. The newsdealer, bootblack, car conductor, ferryman, dairy

lunch keeper, soda water dealer, toy and candy seller, fruit vender, and the small shopkeeper handle many millions of pennies and nickels in their daily transactions, with profits which in the aggregate amount to a large sum. There are innumerable opportunities of which a man with brains and push can take advantage to build up a little business of this kind, if he only keeps his eyes open.

Most men dwell on the drawbacks rather than on the advantages of their own special pursuit. This only proves that every calling has its undesirable features. There is no easy road to fortune. Every beginner should select the occupation for which he has an inclination or is best adapted, and then stick to it.

Goethe remarked that wisdom does not necessarily come with age, and that in certain matters a man may be as likely to perceive rightly at twenty as at sixty. In this age young blood has an advantage. A preference is given to youth and freshness in every calling. Every year a certain number of positions are made vacant by death, removal, or other causes. The doors of opportunity are always opening for the wide-awake man.

Fifty years ago a medical man began to practice before he was twenty. The course of study now occupies four years, in addition to four years of preparation. The best men take a year in the hospitals after graduating. The first two or three years of practice are usually years of waiting. The doctor is more than thirty before he gets fairly to work. The same difficulty is found in other professions. Joseph H. Choate said, at a Harvard dinner: "One of the problems we are considering is, How we can bring our boys earlier into the real business of life? A young man now entering a profession begins when he is twenty-seven or twenty-eight, and if by thirty he is able to support a wife, he has succeeded marvelously. I hope something can be done. But don't break up the classes. Squeeze it out of the preparatory schools. Vacations are too long."

The main thing is to get something to do, it makes no difference what, and then work and wait till something bet-

ter offers. A New York charity superintendent says: "Half of the applicants for relief need only to get a start to become self-supporting. The misfortune of many persons is that they do not know how or where to begin."

Here are two characteristic opinions given to anxious parents, who asked their advice about their sons, by two men who have won fortune and honor by hard struggles. The first one said, "Just let these young gentlemen help themselves a little. You can afford to give them a good education, and that is all they really need. If you coddle them, and give them the idea that they can always rely upon their fathers, it may, in the end, be a positive injury. Love them and encourage them, but put some 'gimp' into them." The other man's advice was equally practical: "If your sons are healthy and willing to work, they will find enough to do, and if they cannot begin at the top let them begin at the bottom, and very likely they will be all the better for it. I was born close by a sawmill, was early left an orphan, christened in a mill pond, graduated at a log schoolhouse, and, at fourteen fancied I could do anything I turned my hand to and that nothing was impossible, and ever since I have been trying to prove it, and with some success. If I could do nothing better, I would hire myself out to dig potatoes with my fingers, and when I had earned enough to buy a hoe I would dig with it, and so I would climb up."

Be Indispensable

The humblest person can make himself indispensable. A leading lawyer said: "My office boy is my most valuable employee." A railway president remarked: "If I had to discharge our whole staff, I would keep my messenger to the last." I know a woman stenographer who has made herself so useful that when she takes her vacation the whole office is upset, and none of her associates can fill her place.

All natural forces follow the line of least resistance. So in life avoid useless competition, and seek fresh fields and pastures new. On this principle Horace Greeley advised

young men to "go West," and thousands have acted upon it. Better seek the verdant prairie land than try to cultivate worn-out fields in the East.

In like manner many new callings offer a splendid chance for those who start with the right spirit and with proper equipment.

It was once my fortune to have to choose between five desirable vacancies. I applied to a railroad president, a man of wide experience, for counsel. He said: "Take the one which promises the most independence and the greatest permanency, without regard to pay." His advice proved sound, as the openings which seemed most brilliant turned out to be unsatisfactory, while the less promising place proved pleasant and profitable.

Most men are content to follow the beaten track, others seek new fields and make positions for themselves. When Seth Low graduated from Columbia College and entered his father's office, he felt as if he was of no special value. A friend advised him to go out among the brokers and get points on the "Street," instead of sticking indoors. He did so. As a result, in six months he knew more about the business than any one in the firm, so that his judgment on many matters was accepted by his father and acted upon. A friend of mine who had lost his position as bookkeeper and who failed to find a similar place started the business of sending cipher cable messages. Later he made a specialty of printing cable codes. He now makes a comfortable livelihood.

Tiffany, the jeweler, is a good example of the value of avoiding ruts and striking out new paths in business. Novelty always attracts attention. The leader makes himself conspicuous in the public eye, and, if successful in one thing, every one thinks him infallible and follows his lead.

Vanderbilt was quick to abandon steamboats for railroads when the time came. Robert Bonner founded his success on novelty in advertising. A. T. Stewart drew trade by selling only for cash, and treating rich and poor alike. He told every salesman to show just as much consideration to customers who entered from Fourth Avenue as to those

The world moves. There are no grounds for assuming that our national growth will cease, or that our industries will not continue to expand and give abundant opportunity and rich rewards to the coming generation.

Our National Growth

The Hon. Thomas B. Reed speaks of our age as the business era of the world. The Union Pacific receipts for one month ($2,500,000) equaled the total yearly revenue of Queen Elizabeth. The present gross receipts of American railroads, even in dull times, would have supported three hundred kingdoms of the size of Henry VIII.'s. These figures indicate the boundless opportunities afforded by the marvelous material growth of the Union.

Within a few years $150,000,000 has been invested in electrical railroads, in addition to the capital employed in other electrical plants. The manufacture of bicycles has grown to vast proportions. The palace car industry built the town of Pullman. These new industries give employment to thousands. The fire insurance interest represents hundreds of millions, and is steadily increasing. Over 800,000 men are employed by American railroads, including some 2,000 officers and 7,500 clerks, while miles of new tracks are added yearly. There are over 10,000 persons engaged in the express business. The United States Government employees, under civil service rules, numbered 85,000 persons in 1896. Labor-saving devices throw men out of work, but indirectly they supply employment to others. American sewing machine companies give work to 10,000 hands. Since the introduction of steam, thousands of men have found occupation in building engines, boilers, rails, cars, bridges, etc. The making of telegraph wires and cables is a large industry. New processes for preparing and packing foods give employment to thousands, and add to every man's earnings by cheapening domestic supplies. Fourteen millions have been embarked in raising California fruits, and $7,000,000 in flower culture. The last half cen-

tury has seen an enormous extension of the American railway system gridironing the Union with iron rails. Millions of immigrants from abroad, and from other states, have populated the West, where farms have multiplied and towns and cities have grown up like mushrooms. The New South has developed its mines and factories to vast proportions.

This is a period of advancing civilization. Wealth is increasing, and with it a love of luxury. Public taste is improving. The best of everything is appreciated. Such spectacles as the horse and dog shows in New York, or the Bradley-Martin ball, would have been impossible thirty years ago. There is unlimited opportunity to cater to the desires of prosperous Americans by gratifying their taste, comfort, and love of ease. It is also an age of specialties and of organization. On the one hand the huge department stores gather a host of diverse articles under one roof—dress goods and groceries, underwear and hardware, books and bicycles, furs and furniture, shoes and satins. On the other hand some men devote their entire attention to making one thing —neckties, picture frames, lamp chimneys, pocketbooks, printer's ink, ice cream. Others make a specialty of dealing in old furniture, rare books, prints, bric-a-brac. No less than $200,000 worth of the Cuban war revenue stamps were bought by stamp collectors. There is an ever-increasing number of popular fads, any one of which can be made the basis of a new business.

It seems to me that the producing field is far wider, and offers more chances to the beginner who has no capital but his hands, than the commercial field. The bridges, aqueducts, tunnels, and other great enterprises now being executed could not have been carried to completion by the men trained before the war. They require a higher class of artisans, and more skillful superintendents than were the men of that day. Executive talent is now in demand. A position as "captain of industry" in the great industrial army should offer the highest stimulus to the ambitious American. The success of Andrew Carnegie in America, Brassey and Bessemer in England, and Krupp in Germany should satisfy the

most aspiring. Whoever can "make two blades of grass grow where one grew before" is a public benefactor. Men like Pillsbury, in the flour industry; Pullman, the inventor of the palace car; Cramp, the shipbuilder; Fairbanks, the scalemaker; Steinway, the pianomaker, and a host of other like men are far more to be admired and emulated than the sham successes of the Stock Exchange.

The following table shows, in a general way, the five principal groups of occupations for men in this country, and also their comparative growth or decline from 1870 to 1890:

	1870	1890
Agriculture, fisheries, and mining	40.29	34.22
Professional service	1.96	2.60
Domestic and personal service	9.39	11.06
Trade and transportation	8.48	12.72
Manufacturing and mechanical industries	14.71	16.69
Totals,	74.83	77.29

Agriculture has declined, owing to the introduction of farm machinery, which has tended to make handwork arduous and unprofitable. The professions have gained in numbers and popularity. Trade and transportation have increased fifty per cent. Manufacture and mechanical industries show a fair advance. The greatest increase has been in the higher departments of business, in those occupations which call for skilled labor. The influx of machinery has slightly lessened the number of male wood and leather workers since 1870. The number of textile workers has remained stationary. There has been a slight decrease in the number of boatmen, fishermen, and sailors; also among laborers in general. There has been a uniform increase in the number of clothing makers, locomotive engineers and firemen, food preparers, metal workers, printers, engravers, bookbinders, steam railroad employees, tobacco and cigar factory operatives. Bankers, brokers, merchants, and manufacturers have increased slightly, and also professional men, but agents, collectors, and commercial travelers, bookkeepers, clerks, and salesmen show a far greater increase, despite the influx of women into commercial life.

Avenues of Work

I have compiled from the census reports the following list of occupations which show a marked increase in numbers engaged therein from 1870 to 1890. This will indicate the tendencies of the time, in connection with this subject, and will guide the beginner in his choice of a calling. Note how the increase exceeds the growth of the population.

	1870	1890
Builders and Contractors	10,231	49,988
Publishers of Periodicals and Books	1,577	6,284
Apiarists	136	1,773
Livery Stable Keepers	8,504	26,757
Actors	2,053	9,728
Architects	2,017	8,070
Artists and Art Teachers	4,081	22,496
Authors	979	6,714
Chemists and Metallurgists	772	4,503
Gardeners, Florists	33,632	72,601
Designers, Draughtsmen, Inventors	1,286	9,391
Engineers, Surveyors	7,374	43,239
Musicians and Music Teachers	16,010	62,155
Theatrical Managers	1,177	18,055
Veterinary Surgeons	1,166	6,494
Agents and Collectors	20,316	174,582
Commercial Travelers	7,262	58,691
Telegraph and Telephone Operators	8,316	52,214
Confectioners	8,219	23,251
Trunk and Pocketbook Makers	2,047	6,279
Paperhangers	2,490	12,369
Plumbers, Gas and Steamfiiters	11,143	56,607
Roofers and Slaters	2,750	7,043
Clock and Watchmakers	1,779	25,252
Electroplaters	——	2,756
Lead and Zinc Workers	649	4,616
Metal Workers	79	16,694
Stove and Furnace Makers	1,543	8,932
Wire workers	2,796	12,319
Hosiery Mill Operatives	3,653	29,555
Silk Mill Operatives	3,256	34,855
Upholsterers	6,111	25,666
Woodworkers	10,789	67,360
Boxmakers	6,080	28,640
Photographers	7,558	20,040
Piano and Organ Makers	3,579	15,335
Potters	5,060	14,928
Rope and Cordage Makers	2,675	8,001
Telegraph and Telephone Linemen	——	11,134
Dairymen and Dairywomen	3,550	17,895

	1870	1890
Lumbermen	17,752	65,866
Stock Raisers	15,359	70,729
Woodchoppers	8,338	33,697
Street Railway Employees	5,103	37,434
Bleachers, Dyers, and Scourers	4,901	14,210
Mineral Waters	458	7,230
Oil Works Employees	1,747	5,624
Messenger and Office Boys	8,717	51,355
Packers, Shippers	5,461	24,916
Janitors	1,769	21,556
Sextons	1,151	4,982
Watchmen, Policemen, Detectives	13,384	74,629

In this country of almost universal horse worship, where most persons of any means own a trotter, not to mention the millions of cattle on a thousand hills, there is ample field for the veterinary profession. Thus far it has hardly been sufficiently appreciated. It will not be long, however, before sensible men will refuse to intrust the care of valuable animals to any but trained veterinarians. It does not take long to master the profession, and young men who are looking about for a calling should ponder its advantages.

The value of live stock in the United States is enormous. Some of the items are as follows: Horses and mules, 11,149,800; cattle, 27,870,700; sheep, 35,935,300; swine, 25,726,800. No other country can make a showing which approaches these figures, and yet no country is so ill provided with veterinary surgeons. In consequence millions of dollars are sacrificed yearly. Hog cholera alone has cost $20,000,000. There is room for hundreds of competent practitioners in this profession.

The course of study at the New York Veterinary College requires two years. The expenses are not heavy. A graduate can earn $1,500 the first year, whereas a young physician's income averages only three hundred dollars. Leading veterinarians have made as high as $20,000 a year. Some complain of the disagreeable features incident to their practice, but that hardly can be avoided. A farmer who would refuse to give more than $1 for a doctor's visit to his sick wife will cheerfully pay a $3 fee to a veterinary surgeon for attending a sick horse. The charge for a

visit to a valuable horse or blooded cow is often $25. The profession is only in its infancy. Its standing is no lower than was dentistry in the early days of that profession. It promises to equal that of any profession. It demands skill in diagnosis, because the patient cannot be questioned. The veterinarian should be a man of large scientific attainments, excellent powers of observation, and possess sound judgment. The famous Dr. Koch was a veterinary surgeon in Breslau.

There is constant demand upon the veterinary colleges for skillful practitioners, and those who have been sent out thus far have at once stepped into very lucrative practices.

Civil engineering is not so promising a profession as formerly, because of the decline in railway construction. Electrical and municipal engineering offer a better and wider field. In time we may expect to see engineers take up contracting, either in opposition to or in partnership with the practical men who now perform such services. An engineer who can supplement scientific skill with executive and business capacity has abundant opportunities for honorable and profitable employment. The average engineer's earnings are estimated at $2,500. Only forty of the eight hundred graduates from the School of Mines have given up professional pursuits, a far better showing than the record of failures in business. The day has gone by when a corporation can be managed in such a way that, as Tom Scott remarked, "I might make a mistake costing the company $3,000,000, and nobody would find it out." The highest technical training is now demanded of executive officers. Electrical engineering is one of the newest fields. Enormous capital is invested in electric plants all over the world. Young men have flocked to the technical schools where instruction is given in electrical science. In the United States there are already 12,583 miles of electric railways. In Great Britain and its colonies there are only one hundred and sixty-seven miles. This illustrates the extent of the business in this country. The American Society of Electric Engineers has eight hundred and fifty members. Those employed in elec-

trical work throughout the Union number 30,000. Special hands earn from $3 to $5 a day. Numerous graduates from the technical schools receive from $1,000 to $2,500 as laboratory assistants, while high salaries are paid to executive men. Electrical experts earn $25 a day. Patent experts in this branch of inventions charge double as much.

Beginners must start at the foot of the ladder, and not expect much pay or promotion until they show practical capacity. Mr. Edison has recently established a training school for his employees in order to meet the demand for experienced and skilled foremen and master workmen.

Telegraphy, which gave employment to Edison in his youth, affords a wide field. In 1890 the Western Union had 20,098 offices. In the same year France employed 58,000 persons in the business; Great Britain, 117,989; Germany, 17,454. Vast as is the world's telegraph system it is not complete. In time no point of commercial importance on the earth's surface will remain unconnected by wire or cable with civilization. A competent telegraph operator should be able to decipher manuscript rapidly and accurately, to send messages intelligently, and to receive and copy them at a fair rate of speed. Quickness is indispensable, but never at the expense of legibility, neatness, and accuracy. The Western Union pays $20 a month to beginners, which may be doubled in a year or two if they are skilled and accurate. Four or five years are required to become proficient. Not more than one operator in ten reaches the higher grades. The chief operators, division superintendents, and office managers are well paid. Most executive officers began as operators. Promotion is slow unless one has influence.

During the Civil War expert operators were paid $118 a month. Now $60 is the limit. Women are paid $40, or even less.

Many telegraph operators are employed in newspaper and business offices, railways, and in other places, where they have shorter hours, better pay, and more agreeable surroundings than they do with the telegraph companies. If

in confidential positions they sometimes receive $75 a month.

The mineral product of the United States for 1895 was valued at $512,000,000. Some of the items were: Pig iron, $82,000,000; coal, $197,000,000; gold, $47,000,000; copper, $38,000,000; silver, $32,000,000; lead, $10,000,000; building stone, $34,000, 000. In the past fifty years the value of the gold taken from California mines exceeded $1,300,000,000. A mining expert says: "The progress of the mining industry in recent years has been so great that no man is or can be an expert in all kinds of mining." While there never were so many good specialists in mining as now, there never was such a demand for well-trained specialists. Mining offers for the right men better chances of success than any other business. The success comes quicker than in other industries. What is more important, a competent man is certain of steady employment at good wages.

Real estate development has always given occupation to thousands. A notable feature of recent years has been the creation of summer and winter health resorts. The Atlantic coast is lined with hotels and cottages. The Adirondacks and Catskills are filled with camps and parks. Florida, California, and Colorado abound in winter resorts. Chautauqua, Asbury Park, and Asheville are examples of rapid and prosperous growth. A single example will show the profit in such undertakings. At Lakewood 25,000 acres were bought for a dollar an acre. In 1898 $25,000 was asked for a corner building lot. George Gould's house there is said to have cost $250,000. There is room for a hundred more health resorts all over the Union.

Architecture has made great progress during the past half century. Formerly most buildings were erected by men who had risen from the ranks, and who started in business without any training. They simply copied conventional plans. This is still the custom in many places, where the average building is erected by the local carpenter, with a large amount of jigsaw ornamentation and very little else.

The enormous yearly losses by fire and the wretched sanitary condition of such houses prove their flimsy construction, while their appearance is detrimental to public taste. Large sections of our great cities are covered with houses erected by speculative builders, which have been rented or bought by some of our best citizens. Gradually there came a demand for more careful and original work. At first this was supplied by builders who supplemented their practical experience by the study of architecture. Their work is to be seen in the splendid mansions of upper New York, and in various commercial buildings and institutions. The public, however, were not satisfied with these structures, and required that architects should be able to design artistically as well as to build honestly. Courses of study in architecture have been provided at Columbia University and at the Massachusetts Institute of Technology. Many of the graduates of these schools have traveled and studied abroad, to observe the best models in European cities. It is becoming the rule to employ architects to design all houses or buildings of any pretension. The result of this demand was seen in the buildings at the World's Fair, and in the recent competitions for the Columbia University, the Academy of Design, the Boston Library, and the New York Consolidated Library, besides the countless office buildings, hotels, municipal and other buildings which have recently been erected.

D. H. Burnham, in "Architecture and Building," says: "There is a fine field for young architects who have the best available training. There were never in the past, and are not now, such opportunities as the future holds in store for men of high worth."

Forestry has long been practiced as a profession abroad. In time it will be made a serious pursuit in this country. The example which George Vanderbilt has set at Biltmore, N. C., and the practical and profitable results achieved there by Mr. Pinchot, now chief of the United States Forestry Department, have drawn public attention to the importance of such work. Mr. Vanderbilt's example will surely find

imitators among other large property owners, Adirondack clubs, and State park officials.

Landscape architecture has been cultivated in America since the days of A. J. Downing. Additional luster has been given to it by the labors of Frederick Law Olmsted, Calvert Vaux, Samuel Parsons, and others. It is a very attractive calling, and furnishes opportunity for both the artist and the practical man. It promises to expand steadily, and, through the growth of public parks and recreation grounds, and the increased interest shown among cultivated men everywhere, to afford profitable occupation for many trained men.

Raising flowers has become a distinct business, in which several millions of capital are invested. Supplying cut flowers alone gives employment to thousands. A florist who has thirty greenhouses near Short Hills, N. J., says: "Flowers, especially orchids, are as safe an investment as any merchandise." Cut flowers are sent through the mails. When it is stated that $30,000 worth of flowers were used at a New York dinner party, some idea may be formed of their consumption. Twenty years ago there were not two-score florists in New York and Brooklyn. Now the number is one hundred and twelve, while the sales have doubled in eight or ten years, with a steadily increasing demand.

Despite the common belief that farming does not pay, there are abundant chances to make a comfortable living in agriculture, if men are intelligent and careful, adapt themselves to new methods, and thoroughly understand their business. There are 4,564,641 small farms in the United States, each worth about $2,908. The mortgages do not represent sixteen per cent of the entire valuation. Few city dwellers who work with their hands or fill clerical positions can boast of homes of equal value. While from 1870 to 1890 our population increased only sixty-two per cent, the number of farms increased eighty per cent, and the cultivated acres one hundred and eight per cent. The dairymen of New York and Pennsylvania, the fruit growers of New Jersey and the Hudson River, and the market gardeners of

Massachusetts quietly work their small farms and make them pay. The total dairy product of the Union is over $400,000,000, and the value of the milch cows $362,000,000. Over $16,000,000 are invested in condensed milk factories which give employment to 14,291 persons. The product doubled in ten years, and so did the number of employees, while the salaries increased fourfold.

Fish culture is one of the new and promising industries. There are a score of fish farms in New England alone. The most barren land will serve, provided there is good water. Raising trout and other rare fish pays well.

Planting fruit trees along roadsides yields an enormous revenue abroad. It might be made to pay in this country.

Agricultural products now constitute seventy per cent of American exports, and far exceed in amount our exports of manufactured articles.

The American farmer needs only business tact and technical training to become prosperous. He produces far less to the acre than the European or Asiatic. He allows a large part of his land to be unproductive. He must learn to utilize barren hillsides, sandy wastes, swamps, and roadsides. He must also learn how to sell his products. The prosperous farmer is not the one who holds his butter and his eggs, his corn and his potatoes, his apples and his wheat, until shrinkage or decay covers all possible advantage or delay, and while waste of time and worry cover more. What the farmer wants is tact in marketing, and that is nothing more than educated common sense.

The average time required to study chemistry is four years. Few students take a liberal course, though all should do so. Most graduates are too ambitious, and expect too much. The chief field is metallurgy, mining, and assaying.

Chemists are also necessary in breweries, oil and sugar refineries, paint, drug, and cigarette factories, and gasworks. The American Chemical Society has nine hundred members, and includes most of the representative men in the profession. There are over two thousand chemists in the United States. Twenty chemists are now employed where one

used to be. An income of $3,000 is about the maximum. The cost of fitting up a laboratory is $400 or $500.

A number of chemists are attached to boards of health, and analyze milk, water, air, and foods. Many of the ablest men, such as Professors Chandler and Remsen, are connected with colleges. These men are often retained as experts in court, and receive large fees, especially in poisoning cases. A few chemists have made money by inventions. The late Professor Casamajor sold his patents to the Havemeyer Sugar Company for $75,000. Chemistry is taught in the physical courses of all large colleges. The best schools are in connection with Harvard, Yale, the Massachusetts Institute of Technology, and the School of Mines, Columbia University.

Nearly all the great manufacturing concerns now employ one or more chemists to analyze raw materials and to utilize waste products. Other chemists have their own laboratories. They make their living by analyzing chemical products, acting as experts in lawsuits, giving advice, devising new chemical processes and perfecting old ones.

The development of the chemical industry has kept pace with scientific enlightenment. Many drugs which were formerly imported are now manufactured in the United States. The annual production of chemicals has doubled in recent years.

The graduates in chemistry from the School of Mines find little trouble in securing situations as assistants in mining and manufacturing establishments. The usual pay is $600 to $1,000 per annum. If they show ability and executive capacity there are fair chances for promotion. Complaint is made of the number of German chemists who are willing to work for small pay, but such men, though they may be careful and accurate, lack the American energy, and seldom rise above subordinate positions. A good chemist, particularly if he is competent to be superintendent, may earn as high as $3,000, and his position will probably be permanent.

Dentistry has become in recent years a profession, with numerous training schools and with practitioners in every

city and town of any size. It is a confining occupation, and therefore not healthful. The successful dentist needs to have manual dexterity. He should also be refined and neat in person. The introduction of new appliances and the help of female assistants have greatly reduced the drudgery of the dentist's work. Outside of the big cities the pay is moderate. In New York many dentists earn large incomes, and have more patients than they can attend to. Skill and social qualities are indispensable. It is only a few years since dentists had no social standing, and were considered charlatans and humbugs. American dentists are unsurpassed. Dr. Evans made a fortune in France because of his social qualities, skill, and the lack of competition from European dentists. Napoleon III. and other sovereigns were among his patients.

Handsome fortunes have been made in the manufacture of dental supplies and appliances. This has now become an extensive and flourishing business.

Pharmacy, like dentistry, has grown within a few years from a minor occupation to a dignified one. Hundreds of students graduate every year from the pharmaceutical colleges in New York, Philadelphia, and Louisville. Many eminent men have been identified with the business.

Sir Isaac Newton commenced his career in the back room of an apothecary shop. Sir Humphry Davy was an apothecary's apprentice. Liebig began as an apothecary's boy, at Darmstadt. The electro-magnetic discoveries of Orsted were commenced in the shop of his father in Denmark, who was a pharmacist. Bequinn, Marggraff, Diesbach, and Scheele, of Sweden, whose scientific researches are famous, were all apothecaries. Pharmacy, therefore, retains a flavor of science. Unfortunately the business is overdone, and profits have been lessened by competition. The department stores sell perfumery and drugs. The druggist's hours are long and his work is confining. It is, therefore, a business not to be viewed with favor, unless circumstances are specially advantageous.

Nearly every famous American has at some time taught

school. Teaching is excellent mental discipline. One never knows anything thoroughly until he tries to impart it to others. Teaching cultivates patience, sympathy, and persistency. The born teacher puts himself in the learner's place, and sympathizes with the latter's point of view and difficulties.

Unfortunately teachers are so underpaid that few men adopt it as a permanent occupation, but use it as a stepping-stone to something better. Nevertheless, Dr. J. S. Billings says: "If you have the teaching faculty by all means cultivate it, as it is rare and well paid." The examples of Agassiz and Professor Youmans, on the one hand, and of Presidents Eliot, White, Harris, Adams, Harper, and Gilman on the other, indicate the possibilities of success for the broad-minded educator, especially if he has executive ability. Just now there is a great demand for capable instructors in every department.

New York is an educational beehive, filled with students of both sexes, from all parts of the world. Thousands of earnest and ambitious men and women come here in search of knowledge, and particularly of advanced training. Barnard College alone, it is said, will draw one thousand advanced scholars. Law, medicine, dentistry, science, pedagogy, elocution, music, architecture, and the drama, all have their students. Such institutions as the Training School for Teachers, New York Trade School, the American School of the Dramatic Art, Packard's Business College, Women's School of Applied Design, are but a few of those that offer special attractions for students of all ages and of both sexes. Well-qualified teachers find little trouble in obtaining good positions. The small compensation given to most of them is chiefly due to the competition of women.

College professors complain bitterly of their compensation. The average salary at Columbia is $1,600, and at Harvard $1,200, both rich universities. A few men of international reputation receive $2,500 to $3,000, but the maximum is $5,000. No man can support a family comfortably in a large city on the average professor's salary.

If he has not private means, he must live in the suburbs, stint himself in books, clothes, social opportunities, or spend on "potboiling" work the time and energy which should be given to his college. The "Harvard Book" contains an eloquent description of the trials and small rewards of college instructors: "Hard-worked, poorly-paid, much-tormented martyrs, whose sole solace is contact with youth and freshness, which keeps men young when their comrades have grown old, and keeps them green when the others have dried up."

The professors in American scientific schools are constantly consulted by business men in relation to practical matters, and, therefore, are broader and more in touch with the best and latest experience than their English or Continental compeers.

A striking example of the possibilities of men rising from the ranks is seen in the case of railroad builders. While a cheap class of labor is employed, and Italians have replaced Irish and Germans, good foremen are in demand. They earn as high as $150 a month. Many of them have worked up from the shovel. They succeed better than civil engineers, who do not seem to know how to handle men. The railway contractor of twenty years ago did his work with the aid of hundreds or thousands of Irishmen, and a sprinkling of Germans and men of other nationalities. The railway contractor of to-day employs Italian labor. It is the custom to sublet all work to small contractors, who undertake four or five miles of road. The small contractor is, in effect, a boss working under the general contractor. The rise of the subcontractor to the management of large interests is not unusual. An industrious or saving teamster lays up enough to buy a pair of mules, and is able to get wages for himself and his stock. His next step is to buy another pair and hire a man to drive them. By the time he has four or five teams he ceases to drive, and becomes a contractor-teamster. He next appears as a subcontractor, and takes progressively larger and larger contracts, until he finally appears as a general contractor competing for hundreds of

miles of railroad. After that his work is that of an organizer, the commander of an industrial army. He seldom visits the actual scene of operations. Perhaps once a month he rides over the line with his engineer, making a suggestion here, asking a question there, making mental note of large features, but seldom troubling about details. "It is absolutely fascinating work," said a Western contractor, "and I long to be at the front. It opens a lucrative field for men of executive talent and honesty, and force of character, though the era of great fortunes made in railway building is past."

Some 75,000 persons are employed by American life insurance companies. Large salaries are paid to the executive officers. Agents are paid commissions on the business they secure, and earn from $10,000 a year down to $1,000. The agent now receives a commission only on the first premium paid. Obtaining policy holders has become so systematized that it is no longer necessary for solicitors to resort to tricks and devices. Insurance canvassers are usually persons of excellent character. The business requires tact, good address, persistency, and knowledge of human nature. An insurance agent must understand figures and know how to persuade. It is an eminently respectable occupation. A local agent in a young town may build up a handsome business. Three New York companies have an annual income of $133,000,000, and their death claims frequently amount to a million dollars a day.

Prospects and Salary

By EDWARD W. BOK

THE average young man is extremely anxious to get into a business position in which there are what he calls "prospects" for advancement. It is usually one of his first questions "What are my prospects here?" He seems to have the notion that the question of his "prospects" or advancement is one entirely in the hands of his employer, whereas it rarely occurs to him that it is a matter entirely of himself. An employer has, of course, the power of promotion, but that is all. He cannot advance a young man unless his employee first demonstrates that he is worthy of such advancement. Every position offers prospects: every business house has in it the possibility of a young man bettering himself. But it depends upon him, first. If he is of the average come-day go-day sort, and does his work in a mechanical or careless fashion, lacking that painstaking thoroughness which is the basis of successful work, his prospects are naught. And they will be no greater with one concern than with another, although he may identify himself with a score during a year. If, on the contrary, he buckles down to work, and makes himself felt from the moment he enters his position, no matter how humble that may be, his advancement will take care of itself. An employer is very quick to discover merit in an employee, and if a young man is fitted to occupy a higher position in his house than he is filling, it will not be long before he is promoted.

There are, of course, instances where the best work that a young man can do goes for naught and fails of rightful appreciation, and where such a condition is discovered, of course the young man must change the condition and go where his services will receive proper recognition and value. But this happens only in a very small minority of cases. In the vast majority of cases where the cry of inappreciation is heard, it is generally the fact that the crier is unworthy of more than he receives.

No employer can, in short, tell a young man what his prospects are. That is for the young man himself to demonstrate. He must show first what is in him and then he will discover for himself what are his prospects. Because so many young men stand still is not that employers are unwilling to advance them, but simply because of the principal fact that the great run of young men do not show those qualities which entitle them to advancement. There are exceptional cases, of course, but as a rule a man gets in this world about what he is worth, or not very far from it. There is not as much injustice done by the employer to the employee as appears on the surface by any means. Leaving aside all question of principle, it would be mighty poor policy for a business man to keep a young man in a minor position if by promoting him he felt he would expand and make more money for his house.

And right here a word or two might perhaps be fitly said about the element of "luck" entering into business advancement. It is undeniable that there are thousands of young men who believe that success in business is nothing else "but what they call luck." The young men who forge ahead are, in their estimation, simply the "lucky" ones, who have had influence of some sort or other to push them along.

When a young man gets into that frame of mind where he believes that "luck" is the one and only thing, or that it is even an element in business which can help him along, it may be safely said that he is doomed to failure. The only semblance to "influence" there is in business is where

through a friendly word a chance is opened to a young man. But the only thing that "influence" can do begins and ends with a chance: an opportunity. The strongest influence that can be exerted in a young man's behalf counts for very little if he is found to be incapable of embracing that chance. And so far as "luck" is concerned, there is no such thing in a young man's life or his business success. The only lucky young man is he who has a sound constitution, with good sense to preserve it, who knows some trade or profession thoroughly, or is willing to learn it and sacrifice everything to its learning, who loves his work and has industry enough to persevere in it, who appreciates the necessity of self-restraint in all things and who tempers his social life to those habits which refresh and not impair his constitution. That is luck, the luck of having common sense. That is the only luck there is—the only luck worth having; and it is a luck which every right-minded young man may have if he goes about it the right way.

Things in this world never just happen. There is always a reason for everything. So with success. It is not the result of luck: it is not a thing of chance. It comes to men only because they work hard and intelligently for it, and along legitimate lines.

Now a word about a young man's salary. It is human nature to wish to make all the money we honestly can; to get a just and as large a return for our services as possible. There is no qualifying that statement, and as most of the comforts of this life are had through the possession of sufficient money, it is perfectly natural that the question of what we earn should be prominent in our minds. But too many young men put the cart before the horse in this question of salary. It is their first consideration. They are constantly asking what salaries are paid in different business callings, and whether this profession or that trade is more financially productive. The question seems to enter into their deliberations as a qualifying factor as to whether they shall enter a certain trade or profession. I never could quite see the point of this nor the reason for it. Of what significance are

the salaries which are paid to others, to you or to me? They signify nothing. If the highest salary paid to the foremost men in a certain profession is $10,000 per year, what does it prove or signify? There is no obstacle to some one else going into that same profession and earning $25,000. The first consideration when a young man thinks of going into business is not what special trade or profession is most profitable, but which particular line he is most interested in and best fitted for. What matters it to a man that fortunes are made in the law if he has absolutely no taste or ability for that profession? Of what value is it to a young man who loves mechanical engineering to know that there are doctors who earn large incomes? What difference do the productive possibilities of any line of work make to us if we are not by nature fitted for it?

When a young man is always thinking of the salary he is receiving, or the salary he ought to get, he gives pretty good proof that he is not of a very superior make. The right sort of a young fellow doesn't everlastingly concern himself about salary. Ability commands income. But a young man must start with ability: not with salary. That takes care of itself.

BUSINESS, TRADE, AND INDUSTRIES

Getting Ready

By EDWARD EVERETT HALE

WHEN I have written a quarter part of this paper the horse and wagon will be brought round, and I shall call for Ferguson and Putnam to go with me for a swim. When I stop at Ferguson's house, he will himself come to the door with his bag of towels—I shall not even leave the wagon—Ferguson will jump in, and then we shall drive to Putnam's. When we come to Putnam's house, Ferguson will jump out and ring the bell. A girl will come to the door, and Ferguson will ask her to tell Horace that we have come for him. She will look a little confused, as if she did not know where he was, but she will go and find him. Ferguson and I will wait in the wagon three or four minutes, and then Horace will come. Ferguson will ask him if he has his towels, and he will say, "Oh, no, I laid them down when I was packing my lunch," and he will run and get them. Just as we start, he will ask me to excuse him just a moment, and he will run back for a letter his father wants him to post as we come home. Then we shall go and have a good swim together. [We have been and returned, and all has happened substantially as I said.]

Now in the regular line of literature made and provided for young people, I should go on and make out that Ferguson, simply by his habit of promptness and by being in the right place when he is needed, would rise rapidly to the highest posts of honor and command, becoming indeed khan

of Tartary, or President of the United States, as the exigencies and costume of the story might require. But Horace, merely from not being ready on occasion, would miserably decline, and come to a wretched felon's end; owing it, indeed, only to the accident of his early acquaintance with Ferguson, that, when the sheriff is about to hang him, a pardon arrives just in time from him (the President). But I shall not carry out for you any such horrible picture of these two good fellows' fate. In my judgment, one of these results is almost as horrible as is the other. I will tell you, however, that the habit of being ready is going to make for Ferguson a great deal of comfort in this world, and bring him in a great deal of enjoyment. And, on the other hand, Horace the Unready, as they would have called him in French history, will work through a great deal of discomfort and mortification before he rids himself of the habit which I have illustrated for you. It is true that he has a certain rapidity, which somebody calls "shiftiness," of resolution and of performance, which gets him out of his scrapes as rapidly as he gets in. But there is a good deal of vital power lost in getting in and getting out, which might be spent to better purpose—for pure enjoyment, or for helping other people to pure enjoyment.

The art of getting ready, then, shall be my subject. Of course, in the wider sense, all education might be called the art of getting ready, as, in the broadest sense, the whole of this life is the getting ready for life beyond this. Bear that in mind, and you will not say that this is a trivial accomplishment of Ferguson's, which makes him always a welcome companion, often and often gives him the power of rendering a favor to somebody who has forgotten something, and, in short, in the twenty-four hours of every day, gives to him "all the time there is." It is also one of those accomplishments, as I believe, which can readily be learned or gained, not depending materially on temperament or native constitution. It comes almost of course to a person who has his various powers well in hand—who knows what he can do, and what he cannot do, and does not attempt

more than he can perform. On the other hand, it is an accomplishment very difficult of acquirement to a boy who has not yet found what he is good for, who has forty irons in the fire, and is changing from one to another as rapidly as the circus rider changes, or seems to change, from Mr. Pickwick to Sam Weller.

Form the habit, then, of looking at to-morrow as if you were the master of to-morrow, and not its slave. "There's no such word as fail!" That is what Richelieu says to the boy, and in the real conviction that you can control such circumstances as made Horace late for our ride, you have the power that will master them. As Mrs. Henry said to her husband, about leaping over the high bar—"Throw your heart over, John, and your heels will go over." That is a very fine remark, and it covers a great many problems in life besides those of circus riding. You are, thus far, master of to-morrow. It has not outflanked you, nor circumvented you at any point. You do not propose that it shall. What, then, is the first thing to be sought by way of "getting ready," of preparation?

It is vivid imagination of to-morrow. Ask in advance, What time does the train start? "Seven minutes of eight." What time is breakfast? "For the family, half-past seven." Then I will now, lest it be forgotten, ask Mary to give me a cup of coffee at seven fifteen; and, lest she should forget it, I will write it on this card, and she may tuck the card in her kitchen clock case. What have I to take in the train? "Father's foreign letters, to save the English mail, my own 'Young Folks' to be bound, and Fanny's breastpin for a new pin." Then I hang my handbag now on the peg under my hat, put into it the "Young Folks" and the breastpin box, and ask father to put into it the English letters when they are done. Do you not see that the more exact the work of the imagination on Tuesday, the less petty strain will there be on memory when Wednesday comes? If you have made that preparation you may lie in bed Wednesday morning till the very moment which shall leave you time enough for washing and dressing;

then you may take your breakfast comfortably, may strike your train accurately, and attend to your commissions easily. Whereas Horace, on his method of life, would have to get up early to be sure that his things were brought together, in the confusion of the morning would not be able to find No. 11 of the "Young Folks," in looking for that would lose his breakfast, and afterward would lose the train, and, looking back on his day, would find that he rose early, came to town late, and did not get to the bookbinder's, after all. The relief from such blunders and annoyance comes, I say, in a lively habit of imagination, forecasting the thing that is to be done. Once forecast in its detail, it is very easy to get ready for it.

Do you not remember, in "Swiss Family Robinson," that when they came to a very hard pinch for want of twine or scissors or nails, the mother, Elizabeth, always had it in her "wonderful bag"? I was young enough when I first read "Swiss Family" to be really taken in by this, and to think it magic. Indeed, I supposed the bag to be a lady's workbag of beads or melon seeds, such as were then in fashion, and to have such quantities of things come out of it was in nowise short of magic. It was not for many, many years that I observed that Francis sat on this bag in his tub, as they sailed to the shore. In those later years, however, I also noticed a sneer of Ernest's which I had overlooked before. He says, "I do not see anything very wonderful in taking out of a bag the same thing you have p t into it." But his wise father says that it is the presence of mind which in the midst of shipwreck put the right thing sinto the bag which makes the wonder. Now, in daily life, what we need for the comfort and readiness of the next day is such forecast and presence of mind, with a vivid imagination of the various exigencies it will bring us to.

Jo Matthew was the most prompt and ready person, with one exception, whom I have ever had to deal with. I said to Jo once when we were at work together in the barn, that I wished I had his knack of laying down a tool so carefully that he knew just where to find it. "Ah," said he,

laughing, "we learned that in the cotton mill. When you are running four looms, if something gives way it will not do to be going round asking where this tool is or that." Now Jo's answer really fits all life very well. The tide will not wait, dear Pauline, while you are asking, "Where is my blue bow?" Nor will the train wait, dear George, while you are asking, "Where is my Walton's Arithmetic?"

We are all in a great mill, and we can master it, or it will master us, just as we choose to be ready or not ready for the opening and shutting of its opportunities.

I remember that when Haliburton was visiting General Hooker's headquarters, he arrived just as the general, with a brilliant staff, was about to ride out to make an interesting examination of the position. He asked Haliburton if he would join them, and, when Haliburton accepted the invitation gladly, he bade an aid mount him. The aid asked Haliburton what sort of horse he would have, and Haliburton said he would—and he knew he could—"ride anything." He is a thorough horseman. You see what a pleasure it was to him that he was perfectly ready for that contingency, wholly unexpected as it was. I like to hear him tell the story, and I often repeat it to young people, who wonder why some persons get forward so much more easily than others. Warburton, at the same moment, would have had to apologize, and say he would stay in camp writing letters, though he would have had nothing to say. For Warburton had never ridden horses to water or to the blacksmith, and could not have mounted on the stupidest beast in the headquarters encampment. The difference between the two men is simply that the one is ready and the other is not.

Nothing comes amiss in the great business of preparation, if it has been thoroughly well learned. And the strangest things come of use, too, at the strangest times. A sailor teaches you to tie a knot when you are on a fishing party, and you tie that knot the next time when you are patching up the Emperor of Russia's carriage for him, in a valley in the Ural Mountains. But "getting ready" does

not mean the piling in of a heap of accidental accomplishments. It means sedulously examining the coming duty or pleasure, imagining it even in its details, decreeing the utmost punctuality so far as you are concerned, and thus entering upon them as a knight armed from head to foot. This is the man whom Wordsworth describes—

> "Who, if he be called upon to face
> Some awful moment to which Heaven has joined
> Great issues, good or bad for human kind,
> Is happy as a lover; and attired
> With sudden brightness, like a man inspired;
> And through the heat of conflict keeps the law
> In calmness made, and sees what he foresaw;
> Or if an unexpected call succeed,
> Come when it will, is equal to the need."

BUSINESS, TRADE, AND INDUSTRIES

The Scholar in Business

By BENJAMIN IDE WHEELER

[Benjamin Ide Wheeler, president of the University of California since July 1899, was born at Randolph, Mass., July 15, 1854. He was graduated from Brown University in 1875, studied at Heidelberg, where he received the degree of Doctor of Philosophy in 1885. From 1879 to 1881 he was instructor at Brown University. After his course abroad he became an instructor at Harvard. In 1886 he became professor of comparative philology at Cornell, and in 1888 professor of Greek. In 1896 he was professor of Greek in the American School of Classical Studies at Athens. He is the author of educational works, including "The Greek Noun-Accent," "Analogy in Language," "Introduction to the History of Language," and "Organization of Higher Education in the United States." He also wrote "Dionysos and Immortality," "Life of Alexander the Great," and was editor of the department of philology in Johnson's Cyclopedia and in macMillan's "Dictionary of Philosophy and Psychology."]

IS scholarship a promise of success in life? This is a common question, and the upshot of it is the other question: Do the tests which the college work applies resemble those which life exacts? The answer can be given only in terms of individual experience and observation, and I give mine for what it is worth. There are individual cases, as every one knows, of success from the lowest third of the class, and the comment of surprise gives them luster. I believe they are comets, however. In my observation, the successful men come chiefly from the first third. When the high scholar turns out a commonplace man, as he not infrequently does, the dunces have their delight, and the one exception outweighs five illustrations of the rule.

A college man wins in life not by virtue of the special

knowledge he has acquired so much as by the habits he has formed. Habits of mind involve an attitude toward truth. Habits of thinking involve a control of the mental processes. Habits of work involve sense for time and for duty. A man who does things at the time when they ought to be done is likely to be wanted. It is the men who are wanted that are the successes. The men who are forever toiling to create a demand for themselves, they are the nuisances.

The best scholars succeed best in life chiefly, I believe, because they have been most regular and punctual in doing their college work. My experience with college students teaches me that they are intellectually much nearer a level than their achievements indicate. It is power of will more than power of mind that differentiates them. Must and ought have fifty times more stuff in them than might and could.

I have known men of the superbest equipment and the finest intellectual and athletic training who were of no possible use for any sublunar purpose, because they could not be relied upon to keep an appointment or to do anything they had agreed to do at a specified time. Having lost faith in their own wills, they had ceased to plan their own work, and went drifting on through life swept with every current.

The college tests are not always such as to prevent some fairly small men and pretty mean men from reaching class honors by sheer digging, but the modern college offers them less opportunity than the old curriculum. Digging is good, for it betrays will fiber, but the "digs" and "grinds" who lack heart and vision will prove to be men of the muck rake.

There is a type of man found well represented in every class of modern American college from whom one may expect a successful life. He does his college work faithfully and stands well in his class. He takes part in student sports and student affairs without being pure athlete or impure class politician. He is clean in manners, morals, and dress. He holds the solid respect of his class without being flabbily popular. He plans his work, keeps his appointments, moves toward a goal, and spends no time in watching himself grow. It matters little whether such a man is valedictorian or not.

BUSINESS, TRADE, AND INDUSTRIES

A College Man's Future

By JAMES BURRILL ANGELL

[James B. Angell, educator and diplomat, was born at Scituate, R. I., January 7, 1829. He graduated at Brown University in 1849, and in 1853 became professor of modern languages and literature in that institution. In 1860 he entered journalism and for six years edited the Providence "Journal," but at the end of that time returned again to the educational field, assuming the presidency of the University of Vermont. In 1871 he became president of the University of Michigan, which post he still holds, though he has been absent from it on several occasions, the first being from 1880 to 1881, when he served as United States Minister to China, and the second from 1897 to May 1898, while acting as minister to Turkey. He has rendered important service in negotiating treaties, having served as a member of the Anglo-American International Commission on Canadian Fisheries in 1887, and as member of the Canadian-American Commission on Deep Waterways from the Lakes to the Sea in 1896. He is a frequent contributor to periodical literature.]

ONE old question is ever new to each member of a graduating class in the last hours of his college course: "What pursuit shall I follow in life?" The aim of these remarks is to give a few suggestions which may help one in finding the answer.

Some persons are by their very make and temperament so preëminently fitted for one pursuit that it never occurs to them, or to any one else, that there is any room for hesitation in deciding what shall be their calling. It is a great fortune to a man to be so constituted that he falls to his work in life as naturally and as easily as the young bird takes to her wings. For all his energies, his studies, his experiences work toward the real end of his life.

What we call the providential circumstances of some men determine their calling so plainly that there can be no doubt about the matter. A son, for instance, is left with the care of a large patrimony, which he can best administer. His duty to mother, brothers, and sisters may be paramount to all other duties. Illustrations need not be multiplied.

These cases are simple. The really difficult case remains for consideration. It is that of the man who has apparently equal aptitude for different pursuits, say for law, for teaching, and for journalism, and is shut up to no one of them to the exclusion of the others. Some men are so versatile that they could do any one of two or three things equally well.

In determining the question of aptitude we may frequently find help in taking the opinions of judicious friends, men of experience who will be frank enough to tell us the plain truth. There is a strange propensity in men to suppose that what is their foible is really their forte. It is said that General Scott believed to the day of his death that his fame would depend on his literary productions, which nobody reads, rather than on his Mexican campaigns. Goethe apparently felt more pride in his Essays on Color than in his Egmont or Tasso. Even in the range of college experience not a few men convince themselves that they are poets, while the rest of the college community remain unconvinced. The explanation of this self-deception is probably found in the fact that we are inclined to consider as our best productions those which have cost us most toil, because we have not been working in the direction of our talent. Let us then be prepared to hear the counsels of our associates who will tell us true things, rather than pleasant things, *vera pro gratis*. The faithful wounds of a friend are better than the flatteries of a foe.

One who is seeking to learn what his future duty is to be will find help in the faithful discharge of present duty. The path opens as we march on. It is the young man who is busy that is most in demand. It is the brave fellow fighting in the ranks for whom shoulder straps are waiting. Go

bravely at the work which Providence puts within your reach. Remember that fine saying of Carlyle that the best teacher for the duties that are dim to us is the performance of the duties which are clear to us. Keep your soul open in a spirit of candor and honesty, ready to receive whatever may prove to be the divine command for you.

OPPORTUNITIES FOR WOMEN

Introduction and Closing Notes

By OLIVER H. G. LEIGH

WOMEN used to lament that their sphere of work was limited. The twentieth century puts them in a virtually boundless field. They are no longer handicapped in the race for a livelihood. If a few disabilities hinder them in certain directions, they have the solace of knowing that avenues open to them are barred to men. The situation that faces the young woman of the period who is bent on making her way in the world is tolerably easy for her to survey and plan her course of action upon. She can seek routine work at market wages. She can choose casual or amateur work, at varying remuneration. Or she may elect to launch out on original lines. Her choice is modified by conditions, first, of her own capacity; second, her taste; third, her ambition; and fourth, by locality. Health is, of course, a prime factor in every case. We must assume, for the present purpose, that the young woman in search of a career is well schooled, bright and apt, in good health, and with common sense enough to save it from damage by the infantile ice-cream-candy weakness and others equally silly and mischievous. She is also wide-awake on the trend of social progress, quick to discern openings and plucky in grasping chances. If she lives in a great city her course must be chosen after a leisurely period of observation and pondering upon alternatives. Her temperament is to be taken into the reckoning. Many costly, sometimes tragical, blun-

ders are rushed into by absurd forgetfulness of this most vital point. A girl ought to give at least as much careful thought to herself as to her dress. Her aptitudes will bear a good deal of straight thinking about. She will find it pays to think and re-think over her pet preferences and enthusiasms. It may save her the mortification of having to retrace steps taken in a hurry or a spasm that is soon spent. She may find, now or later, that she is better adapted for life in a town, or for a rural sphere. Happy for her if she discovers this in time and is saved from the racking distractions of big city life, where, if opportunities are more, so are competitors, while the charms of ideal life are fewer.

From any point of view there is much to be said on both sides. Enough that we have tried to put our ambitious young friend in possession of a few keys, with one of which she may open the casket that holds a bunch of keys of suggestion, by which she can herself find good counsel and the mainspring of self-help.

The pursuits in which women can engage, and many are actually well established, are far too numerous to be named in detail. The girl with the gift of thinking for herself is adding to them almost daily. Perhaps the chief value of the pages that follow lies in the stimulus they may give toward striking out original lines of work by those who read them.

OPPORTUNITIES FOR WOMEN

Women in the Colleges

By NATHANIEL BUTLER

A FEW New England colleges and at least one of the great Western universities appear to be somewhat concerned, if not positively alarmed, on account of the increasing number of women enrolled in their classes. This uneasiness is explained and justified in various ways, and the very phenomenon that occasions it is regarded by many with entire satisfaction and approval.

In the Middle West and the Northwest, men and women in the colleges seem to be upon the freest and frankest terms of equality in every regard. The question we are discussing seems, on the whole, to receive no concern or attention west of New York and New England. The situation seems, therefore, to furnish a problem only for Eastern and chiefly New England colleges. Within this region are to be found the best examples of three types of college institutions: (1) Colleges admitting men only, of the type of Amherst, Dartmouth, and Williams; (2) colleges admitting women only, of which Smith and Wellesley are examples; (3) colleges originally designed for men only but now open to both men and women. Examples of the third class are Colby, Bates, Wesleyan, and Brown. Harvard and Yale, being universities proper rather than colleges, do not enter into this discussion, and the problem obviously does not concern them. The first and third types of institutions just referred to are rather forced to ask these questions: What are we to think

about the presence of women in the colleges? What attitude ought the college to take in reference to it?

The more one thinks of it the less the question appears to be one involving principles hard to apprehend and to state, and the more it becomes a question of simple fact and expediency. In the first place, admission of women to institutions of a sort at first intended for men alone is only a part of that general "open door" policy in regard to women that has marked the last thirty years, and that in general is regarded as wholesome for society. There appears to be no reason why women should not have as free admission as men to every avenue leading to activity and advantage. On *a priori* grounds there can be no good reason for not giving her the same education with men, if she wants it, and the modern view discloses no *a priori* reason why she should not, if she so wishes, receive that education in the same place with men. The present discussion involves no revival of the obsolete question of woman's "capacity" or "abilities," nor of the "proprieties." A large majority of people who care about the matter would probably agree that there is no general fundamental objection to the presence, in the colleges, of women who choose to be there.

Further: Many, probably very many, of the women who are now in the "men's colleges" would, if they were entirely free to choose, enter institutions of the type of Smith and Wellesley. They enter the coeducational institution for economic reasons or for reasons involving some sort of practical convenience. There are so many good colleges that almost any girl can find one near home. Attendance there is convenient and inexpensive. She must seek her higher education there or not at all. Bryn Mawr, Vassar, and Smith are beyond her reach in distance or cost, or for reasons demanding that she be within easy reach of home.

What then? Shall we at once fling wider the college doors to all and sundry? We would not do that. We would have it borne in mind, in the first place, that the colleges in question were, for generations, open only to men. The great mass of their graduates consists of men. These

men remember and love the college as it was, with all its simple and genial associations. It is in truth their alma mater. It is wrong to these sons of the college, suddenly and radically to change its character and associations, and the fact does not escape the attention of its sons—and so the use of a source of great power—if it merely disregards this fact.

Moreover these colleges are even now organized and planned primarily for the training of men. It is their first duty legitimately to attract and soundly to train *men*. So far as they fail of that they fail of their specific function. If women desire this training, by all means let it be open to them. But most of all let it be upon terms of equality with men, but by no means let it be in circumstances that put a limit upon the value of the colleges to men, for whose training they primarily exist. Whatever may be true in the future, it is unquestionably the fact now that for the "old-line" colleges to admit women without some special restriction would have just that effect. There is little doubt that the number of women seeking a college course increases more rapidly than the number of men. Women will seek admission to the colleges in larger and larger numbers. Some of the best men already turn away from colleges which they would otherwise enter because women are found there. Larger numbers of these men will turn away from the colleges where the proportion of women is large and increasing.

It affects nothing to say that this is very foolish on the part of the men and that such men would better go elsewhere. Grant that; yet it is a condition, not a theory, that we face, and whether the causes underlying the condition are worthy or not, the fact remains that the college designed first of all for young men, wrongfully limits its public usefulness and inflicts upon itself internal injury if it adopts any policy that turns away from its doors first-class men who otherwise would enter.

It would seem to be the part of wisdom, then, for the college to limit the number of women to be enrolled at one time, and, further, to admit only those whose capacities and

ambitions make the course they seek especially appropriate. If it be asked what is the ground of such limitation, the answer is, practicability.

We may as well admit, and approve, the fact that women are in the colleges to stay; that it is right that they should enjoy educational advantages as high as those of men, and enjoy them as freely; that it is well that they can find these in the colleges near their homes. But it will be a wise policy to keep clearly in view the fact that we are yet in the stage of experiment and transition in the education of the sexes, and that only a wise conservatism and a regard for established traditions are consistent with safety and utility.

Making Homes Beautiful

By MARY TILLINGHAST

THE present outlook for women in household architecture and decoration is, I think, extremely good. Americans are awakening to intelligent recognition of its necessity and possibility. Women know as well as, if not better than, men what a home requires to enhance its comfort and its beauty.

The woman who aspires to be a professional interior architect and decorator should have liberal education and wide knowledge of the world. The latter is absolutely essential, since the decorator must be able to ascertain the taste, purse, and social surroundings of her clients in order properly to express their individuality; and this is impossible unless she has had her eyes opened by travel and contact with the world's best art.

An erroneous impression prevails among both artists and laymen that household decoration is confined to the hanging of draperies, the upholstering of a divan, and the arrangement of silk pillows, etc. Unhappily, this superficial understanding of the art leads not a few women into the field, where, owing to the fact that they are women, they appeal to the sympathy of those who wish to help them, and who—their knowledge of real artistic work being equally limited—accept what is offered unquestioningly, and pay well for the same.

Thorough and practical training in architecture is the

foundation of artistic household decoration. Without it no woman or man—there is no sex in art—can hope to become an intelligent artistic decorator. Architecture is the first step preparatory to the study of interior decoration. If a woman cannot begin by apprenticeship in an architect's office, let her enter a school strong in that branch of art. Reading and observation must supplement this technical training.

The literature of art is not taught in this country. There are a few artists who have studied abroad, had their attention roused, and finally taken up a systematic course of reading. I have often wished that some one would awaken our art schools and teachers to this lamentable defect in the student's curriculum. Our museums and libraries are well stocked in the best art literature. Nowhere in this country can a student study to better advantage or at less expense than in New York.

Feeling for color is of paramount importance. It is born, and cannot be attained, save in a limited degree. The decorator must know not only the artistic but the commercial value of every kind of material involved in an interior decoration. Details of the cost of wall paper, materials for wall hangings and draperies and the amount, possibilities of change in designs, colors, or style must be at her command. Of course textile fabrics in design, color, and texture vary every year; still, there are certain defined principles that underlie the whole.

The household decorator must be a mathematician. Close calculation as well as knowledge of weights and measures enter largely into the work. Executive ability and common sense are also essential supplements to artistic sense and technical training.

I was once asked by a young woman of no little taste and talent if I did not think that she could do as good work as I and make lots of money.

"If you are willing to enter an architect's office and work eight hours a day for a couple of years I think you might succeed," I replied. A cry of protest met the proposition.

"I never could do such a stupid thing and waste so much time. Work eight hours a day! Impossible!"

The decorator must not only work eight hours a day, but every moment, in thought or deed, if she has her art at heart. I find that the stumbling-block to women is their unwillingness to go to the bottom of things. They shrink from paying the price of hard study. They look only to the high lights, the finished picture. The mastering of the decorator's art is in a way an anticlimax.

Success requires knowledge of the various trades that go to the erection of a house. It is absolutely necessary to keep up to date in plumbing, lighting, electricity, and heating. Heating and lighting are now most important subjects. The decorator should know everything pertaining to the construction of a dwelling house from cellar, laundry, and kitchen to bath-room and attic; the varieties of woods used for floors, their durability and price; likewise the varieties and prices of marbles; whether marble, tile, or stone is more adaptable or cheaper for a certain purpose. All these apparently prosaic details play no small part in the utility of the decorator. The more of this commercial information she possesses the better she is able to control workmen and serve her client.

When it comes to selection of fabrics and furniture the decorator must know the latest designs, their durability or desirability, cost and quantity required, so that close estimates can be made and satisfactory results attained. Make yourself familiar with the quality, design, and price of every material that enters into the interior decoration of a house and ascertain at what stores they are to be had. Educate yourself in these important matters. New York is full of rich and curious shops. The merchants are always ready to give information, particularly when they learn that the inquisitor is a student, earnest and intelligent.

There are fine marble yards, where workmen will explain the differences in marbles. Suppose a man is undecided whether to have a marble or stone mantelpiece in his drawing-room. The decorator should be able to tell which material is the more desirable for that particular house or room. Some

marbles and woods are softer than others, and yield more readily to carvings. Now women rarely know these things; never study them, and do not deem it essential.

House decoration is largely a side issue to me, but one that I enjoy immensely. Few in this country, owing to general ignorance of the history of art, realize how largely art has always entered into the industries of the world. If this fact was better understood by students who come here to study, struggle, starve, or despair, in the effort to paint a picture to be hung on the line, there would be fewer poor artists and more good artisans.

You must be proud of your work and dignify the smallest detail of it, if you hope to succeed. Shortly after the unveiling of my window in Grace Church, one of the workmen noticed a couple of young girls who bore the earmarks of art students studying the design with apparent enthusiasm.

"You paint on glass?" he asked.

"Oh, no," they replied in an injured tone; "we are artists."

While assisting Mr. La Farge in the decoration of Cornelius Vanderbilt's house I tried to help along two struggling art students by employing them to work on some of the tapestries, a branch of art that invited the serious study of the old masters. They came to and from the studio in a stealthy manner, as if ashamed of being identified with the work. Their ideal, from their standpoint, was infinitely higher. Vain to tell them that Raphael and Michael Angelo had expended some of their most precious time and genius on tapestries that are still the delight of the world. Subsequently one of the girls married, and when I met her at a reception with her husband she asked me never to mention to him that she had ever worked in my studio at tapestry embroidering!

Household architecture and decoration are not only interesting throughout, but pay well; pay better than exterior architectural work. Remuneration is to be had by commission and contract. I work on both bases. I never take a vacation in the accepted sense. Change of scene in pursuit

of new things that will broaden and enrich my work is all the vacation I wish or require. It is impossible for me to tell a woman in detail how to become a decorator, or how I have learned the art. Given natural taste and desire, with determination to go to the foundation, to pay the price of knowledge in drudgery that is never apparent, there is no reason why women should not occupy largely this practically unworked field, which increased wealth and liberal education are daily broadening throughout the country.

Wood Carving

MRS. G. T. DRENNAN, in an article on "Wood Carving for Women," written for "American Homes," says that, though not a practical worker herself in this art, its beauty and desirability for feminine hands have forcibly impressed themselves upon her.

Wood carving is a fascinating branch of art, and an industry not by any means beyond the capacity of women. It is artistic, useful, and highly remunerative, embodying the always desirable elements in any industry for interesting the mind, occupying the hands, and replenishing the purse. It is also undoubtedly one of the first and foremost industrial arts of the day.

Woods differ in quality, some better adapted to one branch, some to another. American sylva is as rich as any in the world, and for all artistic handicraft and wood carving there are woods as beautiful and plastic to the carver's tools as the marble to the sculptor's chisel. Tupelo, gum, maple, cherry, orange, holly, walnut, and cedar are elegant in grain and finish. Maple is well adapted to staining in imitations of choice originals, as it possesses a fine grain. Orange wood is as smooth as French kid, and of an exquisite ivory tint. It is considered better than the English limewood, as the latter is subject to the attack of worms, which destroy its beauty.

The red cedar of our forests is one of the finest woods for carving; its natural color is bright, and its durability great.

[illegible] are found in the Southern [illegible] are employed in cutting cedar [illegible] the ingenious wood carver the [illegible].

[illegible] first took place in France [illegible] created such a furor in the artistic [illegible] making was styled *ébénis-*[illegible] be generally used. Ebony [illegible] the ancients, as their gods and statues [illegible]. Its metal-like hardness required [illegible] turning, and the jet-black surface [illegible] the most beautiful and intricate in-[illegible] materials. The famous boule-[illegible] inlaid with mother-of-pearl, [illegible] in bronze. It received its [illegible] Charles Boule, who was the [illegible] of the time of Louis XIV., and [illegible] are still preserved as the [illegible]. There frequently occur variations in [illegible]. It is sometimes streaked with dull [illegible] of a deep purple tint.

[illegible] and Southern States, is ivory [illegible] beautifully veined. It now rivals [illegible] for piano casings. Books are [illegible] umbrella handles it rivals [illegible]. Book covers and pianos are [illegible] ivory hue, polished or [illegible] most beautiful for work-[illegible] sales, and such purposes.

[illegible] as it is extremely resinous, [illegible] depends the richness of its color [illegible]. Some of the most beautiful specimens of old-[illegible] are of carved rosewood.

[illegible] Wells, in the industrial school of Sand-[illegible] which she established and sustains, gives special [illegible] wood carving. Specimens of the work from the hands of the maidens under tutelage frequently command high prices, and are exhibited as fine works of art.

The use of burnt wood in decoration, an art which dates from mediæval times, is having its renascence in this country. It bids fair to become an important factor in the artistic finish of our buildings, public and private. Authorities say that dry woods, free from gummy or resinous parts, are the only suitable kinds. The white or yellow poplar of the United States is said to be well suited for burnt wood designs. Fine results are obtained by combining harder, darker woods, such as oak or walnut, that impart rich, dark tones in contrast with the lighter poplar.

Art Designing

By CANDACE WHEELER

HUNDREDS of young women art students have self-maintenance in view. The majority, however, soon recognize the fact that liberal self-support by means of art is possible only to exceptionally placed or exceptionally gifted women. The others naturally turn to designing.

It is not an unwise choice, because in this day successful manufacturers depend to a certain degree upon art for the success of their manufactures. Whether the demand will continue to be greater than the supply depends upon the careful adaptation of art knowledge and effort to the requirements of the manufacturer.

There are two classes of professional designers—the general designer and the special one. The career of the general designer is the one most eagerly coveted by the woman art student, because it is much more varied and interesting; but it is at the same time the one requiring a greater amount of technical knowledge than the average student can acquire in a short course of from two to three years' study.

The general designer, to be thoroughly accomplished and capable, must have mastered the whole history of decorative and applied art in all different periods and styles. She must be able to compose decorative designs correctly and successfully, whether for a carved wood wainscot, a marble frieze, a picture frame or a book cover.

If she chooses to confine her efforts to one of these things

she becomes a specialist, and must accept the duties of the special designer.

As a rule a woman's art education is not broad enough to fit her to be a competent general designer; and, in fact, there are not so many successful women specialists as there should be. They have not yet learned to choose a certain line of effort and pursue exhaustive practical as well as historical study in that particular direction.

Perhaps the most pervasive idea of design among students is that of combining drawings of plants and flowers into repeating groups, for printing upon textiles and wall papers. The inclination to pursue this line of work is natural because students are constantly surrounded by wall papers and cloths, and have not yet learned to note ornament in other manufactured things. Then, also, designs printed upon wall paper, silk, and chintzes are more literal, more like pictures or colored drawings than are other kinds of ornament. They appeal to the inexperienced student as illustrations appeal to a child.

A great deal of artistic ability can be expressed in designs for wall coverings, but the field is hardly broad enough to admit every student who wishes to become a designer. There are countless girl students, and not by any means an equal number of silk, printed cotton, or paper mills.

It is true every mill must employ a designer, a specialist, whose business is not so much to compose designs as to adapt them. His skill in this makes him indispensable to the business, and commands a salary of from $10 to $20 a week. He is often woefully lacking in the sense of composition—that is, in the appreciation of the grace and beauty possible to composition—but he is able to secure regular employment and that most desirable thing—a fixed salary.

This is the point I wish to make: That even without really artistic expression a designer who has thoroughly mastered the technical difficulties of his particular line of manufacture —and there are many special lines—can secure regular employment. Technical ability alone is worth a salary, and if united with artistic ability it is proportionately valuable. I

often ask myself why the work of a special designer for textiles should be so frequently lacking in grace and artistic quality, and why the girls who draw and compose so charmingly should not at the same time be capable of suiting their work to the printing machine. Either more art knowledge and feeling are required of the specialist or more technical knowledge on the part of the student before the best artistic results come to the public or pecuniary reward to the designer.

So far, while there has been a great advance in the qualities of our so-called art manufacturers, it seems to have profited the manufacturer rather than the designer; probably for the reason I have indicated—that the clever occasional designer has not acquired routine knowledge; has not fitted the work to the machine.

If a student wishes to secure salaried employment she must take a leaf out of the specialist's book; she must be able not only to fit her own designs to machinery, but those of others as well. She must know the capacity and variety of printing machines; she must learn what they cannot as well as what they can do, and understand the economic advantages of certain processes over others.

All this is certainly within the capacity of woman to acquire, and yet I know of no instance where a clever and original woman designer is in regular employment in a silk or cotton mill, producing good designs, and at the same time performing what may be called the drudgery of the profession. Unfortunately the drudgery is at present indispensable to the manufacturer.

It must be remembered that the application of art to new methods of manufacture is comparatively recent. Manufacture itself has been forced to meet increased demands of commerce and has rushed forward, constantly inventing new facilities, leaving behind its old-time companionship with art. But when even trade and commerce began to be aware of a loss of value in manufactures by this divorce the lagging partner was hustled forward and confronted with new problems and conditions. The mind and hand could no longer

work leisurely and conjointly, the thought must be expressed by the more speedy machine. It is this double demand for quantity and cheapness, as well as for good applied art, which has encouraged a sort of amateur design, possessing many beautiful qualities which as yet—because the application of them is not yet fully mastered—cannot command adequate compensation.

It is this condition which must be met by the woman proposing to make a profession of designing for textile manufacture.

In other lines of design technical knowledge is not so imperative. That is to say, a thorough familiarity with style, based upon a sensible understanding of methods of application of ornament to material, will go further than much technical knowledge without style.

For instance, the designer of silverware or metal of any kind must know how the best effect can be produced upon the material, but his designs themselves are not so governed or hampered by the laws of repetition and space as when applied to textiles or wall paper.

Beautiful and graceful lines of ornament can be applied to many things simply as lines of ornament without special study as to methods of application, and a facility in this kind of composition may be widely and variously useful.

I must still, however, reiterate that continuous employment and salaried ease depend upon special training.

The designer who is employed by a manufacturer is at present usually a man, although women are now invading the profession. He is also a very busy person. The works must be kept going, and new patterns are constantly in demand. If the manufacturer is to maintain himself against the competition to which he is exposed, if the works are to run full time, and both the operatives and the proprietor are to make money, the patterns of the goods produced must strike the popular taste, and orders must pour into the office of the concern for fresh supplies.

As a rule, the best that a manufacturer can do, after bringing out a new design, is to gather the cream of the

business during the first rush of orders for goods of that pattern. Rivals are certain to watch him with the greatest interest and to follow him in every successful idea. He must, therefore, when he has once hit the popular fancy, obtain the largest immediate sale, and then, while not neglecting future orders for the last successful pattern, press on toward bringing out a new one.

Designers, men or women, often receive especially high salaries, but as a rule they are paid from $15 to $25 a week when regularly employed. There is no trades union among designers, and they do not therefore always obtain as good a price for their labor as engravers in print goods factories. The latter are paid from $24 to $30 and $35 a week. But a really good designer, whose ingenuity actually brings business to the factory, is certain to receive special consideration in the matter of salary.

Industrial Designing

By MRS. CORY

ONE of the most pleasant and at the same time remunerative branches of woman's work is designing practically for wall papers, oilcloths, carpets, book covers, silks, and all fabrics which contain a pattern printed on or woven into the surface.

Twenty years ago there was no woman who designed practically for any manufacturing purpose, or any school in which was taught the making of actual working designs. In one or two schools there were taught the theory and principles of design—mechanical drawing, theory of color, historical ornament, conventionalization, balance, symmetry, and so on; but none taught its pupils to apply these principles to the making of workable patterns which could be carried to the printing drum, the Jacquard loom or dobby machine, and printed or woven from, just as they were, without being redrawn or recolored by a practical man.

Until recently there was only one practical school—Mrs. Cory's Original School of Industrial Art for Women, No. 159 West Twenty-third Street, New York City—where the making of actual designs, such as are made at the factories themselves, correct in every technical detail, could be learned and the training of professional designers accomplished. In a number of schools the simpler designs for printed goods, such as wall papers, drapery, silk, and cotton prints, are

taught; and one or two in Philadelphia and Boston teach designing for a few grades of carpets. In the original school, however, it is possible to learn practical designing for carpets of all grades, rugs, raw silk furniture coverings, table linen, Marseilles quilts, brocades, ribbons, swivel silks, blankets, bath robes, fancy borders, and all goods having a pattern woven into their surface as well as printed upon it.

Twenty years ago this lady, having decided to become a practical designer for carpets, discovered by her own experience the impossibility of securing the needed instruction in any school existing at that time, in even the best of them of that day, Cooper Union. She then determined to establish for other women a thoroughly practical school of industrial design, to be maintained exclusively as such, and she acted on this resolution.

The school has grown and prospered, and is perhaps the best-known institution of practical design for women in the state. Pressure has been brought to bear upon the founder, many times, to extend the curriculum into lines set by other schools. Applications have been made for cast drawing, architecture, flower painting, life work, and kindred branches of art; but the reply has been: "No; these branches can be studied in hundreds of schools; in my school there shall be taught nothing except design, pure and simple, and it shall be taught fully, technically, practically, to the minutest detail, and as perfectly as may be possible." To this determination she has adhered until to-day this school stands foremost as the best and only one in which women can learn to design practically for all kinds of woven and printed fabrics.

We wish it to be understood that this institution is exclusively a school of practical applied design. There are no side issues, no extras. Those wishing to study drawing from casts, architecture, painting in water colors or oils, painting from life, can be well taught in all these branches in hundreds of good schools throughout the United States. Those, however, wishing to study designing practically in all its branches—for the most intricate and beautiful fabrics as

well as for simpler goods—should come here, where the profession is taught as in no other school in the world.

We do not keep our pupils two years on historical ornament, for that is not necessary; neither do we teach cast drawing, for that also is not necessary for a designer of fabrics, wall papers, book covers, and the like, but we do teach, thoroughly and well, the practicalities and technicalities of design for all woven goods.

We have been established for nineteen years, and are known to the manufacturing world, designing for manufacturers abroad as well as for those at home. We have the confidence of these men, who when in need of designs or designers come to us, feeling sure we can supply them with thoroughly workable practical designs for any and all purposes, and competent workers in all branches.

All good training in drawing is a help, certainly, and for one who has plenty of money and time at her disposal a long course of several years' duration will do no harm, and is a pleasant thing to have; but the pupils who come to us, as a rule, feel the necessity of becoming self-supporting at the earliest possible moment, and this we help them to do, not feeling that we have the right to keep them dragging on, at a more or less heavy expense, for years, when they can learn to design well and to do good work, to obtain positions, and sell their designs in a comparatively short space of time.

We feel that with our nineteen years' experience, and by putting our best energies and strength into this one exclusive profession, we have perfected it to the highest degree, and can offer the best possible instruction to be obtained in practical design.

The pupils of this school graduate with practical knowledge, and readily obtain positions in the design rooms of factories at good salaries, or sell to manufacturers designs made at home, receiving full payment for the same, for this is one branch of woman's work in which she receives the same payment as is given man for the same grade of work. Graduates from this institution now occupy positions in a

variety of factories in all parts of the United States and Canada. Some young women are employed in the carpet factories making beautiful patterns for ingrain, Wilton, body Brussels, tapestry, velvet, and moquette carpets. Others are in manufactories designing for Wilton and Smyrna rugs. Many have positions in Paterson, N. J., in silk mills, where they are producing designs for elegant brocades, fancy sash ribbons, labels, silk hangings, and dress silks. Others again are working on silk ginghams and swivel silks, one young woman having invented two new weaves during her first year in the design room. One graduate is designing for pyrography and carrying out her ideas in leather. Any number are working in the pattern departments of shops where printed goods, wall papers, challies, lawns, ginghams, oilcloths, and prints are made, while others have been most successful in the creation of book covers, Christmas and Easter cards, and other dainty novelties for publishers.

Pupils who work at home and sell their work to the manufacturers have figured in all the branches of industrial design mentioned above; and very many more have worked in stained glass, handkerchief borders, piano panels, window shade borders, endolithic marbles, and other fields in which designs are used.

Not only have they designed for American manufacturers, but for those of Europe as well. Carpets for Leeds and York, England; table linen and towel borders for Dundee, Scotland; china for Carlsbad, Austria, and embroideries and mattings for Japan—these have all been made upon designs conceived and sold by the pupils of this school.

A large number of graduates have become teachers of drawing and design in other schools, or have established institutions of their own. The lowest salary ever paid to one of these young women is $8 a week for a beginner, which sum was soon raised to $12, and then to $15 a week. The highest salary paid is $35 a week; but some of the women and girls who work at home make even more than this. A fair average salary is $25 a week. The hours are not long, from 8:30 A.M. to 5 P.M., with an hour of respite at noon

and a half holiday on Saturday, as a rule, although in some design rooms work does not begin until 9 A.M.; and, during the winter, it stops as soon as the light has grown too faint to see well, and this on some days is at 4 P.M.

The work itself is delightful. To see growing under one's hands all the beautiful ideas conceived by a fertile brain, to see one of them come into being and grow into a perfect thing, and to know that when finished it will be of practical use, and, because practical, will bring its fair value, is indeed a happiness.

Commercial Art Work

By LOIS KNIGHT

IT is difficult to put into words lessons learned from experience, especially difficult when they are intended to help those who are about to tread the way you have stumbled along. I have an inherent belief that every woman has a right to do the work she feels herself capable of doing best, provided she works earnestly and never forgets her duty to herself.

Business tact is nothing more than practical knowledge of the commercial side of one's work. It is knowledge only to be acquired by contact with business men and by striving to supply their wants at the market value. Woman must work shoulder to shoulder with man. She has no right to expect work unless she can prove her capability to do it as well as any man.

After three years' delightful study in New York in engraving and drawing, I found myself as helpless as a child so far as practical knowledge of my art was concerned. I stood no possible chance in competition with men who had engraved for twenty years. Once convinced of this fact I began to question how they learned the art. I found they had all been taught in the school of practical experience. They had served apprenticeships in engraving rooms, mastered the commercial and grown into the artistic work that leads the world to-day in fine engraving.

Following the advice of an accomplished artist in charge

of the engraving department of a leading publication, I set about to learn the commercial side of engraving as a man would. He loaned me some commercial tools, and encouraged me to master the practical part of my profession, without which, he assured me, I could never hope to succeed. Subsequently, I set out for Providence, R. I., where I worked for two years in a large engraving and illustrating house. I received $9 a week the first year, and $10 the second year. Instead of being employed, as I had dreamed of being, to engrave from paintings of the masters, I began two years of work, eight hours a day, making cuts of watch chains and cuff buttons.

It was in these months of discouraging, monotonous, wearing work that I gained the discipline that has since been to me of such inestimable value. I had never known before the meaning of serious work. I was entirely alone in a strange city, the only woman at the workshop, daily forced to compare my work with that of men grown gray in the profession. It was constant chagrin to find that my academic training was of no practical value whatsoever. Those two years at Providence were worth more to me than five years of study without practical application. It was there I learned the cash value of work, the necessity of mastering all details that make work marketable. There I acquired the strength that confidence imparts, the training in endurance that is absolutely necessary to success, and the realization that anything is artistic if you make a picture of it.

At the end of two years' apprenticeship I returned to New York. As much of my work at Providence had been on jewelry catalogues, I naturally sought jewelry firms for employment. One day I entered a jewelry store in Union Square and asked the proprietor to let me illustrate his catalogue. After looking at proofs of my work, and asking my prices, he said he would consider the matter for a few days.

In the interval I spent the most anxious moments of my life. A week later I began work on his catalogue, which kept me busy a whole summer. I always recall that catalogue with mingled pride and amusement, my anxiety over

the work and the fearful sense of responsibility. Since then my experience has broadened widely. Through that jeweler I met others of the trade for whom I have handled in a season ten times the amount of work covered by that first summer. I have come to feel strongly the courtesy with which I have always been treated, and am grateful for the help and sympathy I have received from men, all of which has tended to lighten labor.

But this is what I want to say, and to say strongly: The great majority of men and women who are really successful learn their first lessons in the practical part, then grow. Training in the artistic comes later, comes after they have stood the test of the routine and the monotony of the practical. Go to work among workers, not among dreamers.

If you feel you have talent for drawing or engraving or designing, go where that work is done, and offer a year of your time without compensation. Then, if you stand the test of that year of strain on your enthusiasm and strength, you will be worth something to your employer. You can then begin to study along higher lines, having the advantage of practical knowledge to build upon.

Go bravely to your eight hours a day; don't stay away for a headache. It is discipline that will strengthen you for all time.

There is an unlimited field in New York for women in all artistic lines, particularly in engraving. Nearly every firm of note issues a catalogue. Business men have learned that a picture of anything they have for sale, that enchances its attractiveness, pays them; consequently they are willing to pay the artist who makes it.

Not long since, the manager of one of the largest corset firms in the city told me that it is impossible to get really good artistic sketches of corsets. This is a field practically unoccupied. It pays well, and certainly is more satisfactory, if not more self-respecting, than to harass suffering publishers with impossible illustrations for books.

Another unworked field is the retouching of photographs. I know of no line of work at present that requires more skill

or pays better. These are but two of many openings that I have encountered in my business life that demand skilled talent and pay well for the same.

Business life is not without its trials, but pleasant phases are not wanting. No self-respecting woman need fear or dread it. Men are almost invariably courteous and respectful, kind and helpful. The occasional exception only increases appreciation of the rule.

Millinery

By BESSIE ANNIE LOSEY

TO all those who think of taking up millinery let me say, first of all, you must have taste for combining color and materials.

Every woman cannot become a trimmer, but nearly all can be good milliners. "Trimmers are born, not made," is a phrase we constantly hear, but it is possible with practice to become a trimmer, though the style may not be as chic as that of a French *artiste*.

The work is at all times fascinating, though during the height of the season it is often laborious, as the hours of work cannot well be regulated, and in a crowded workroom it is extremely uncomfortable.

Many girls have a natural taste and talent for the art, having for years made all their own hats and bonnets; for those a course or two at a school is a great benefit, as they will learn the simpler ways of working and save much time. There are various other reasons for women taking up millinery: For their own use, thus having more at less cost, and we all know the cost of materials is but a small part of the price of our headgear; as a fad, because others do, and, again, having to earn their living, girls imagine there is more money made and less time spent than at other trades. For the few there is much money; for the many, less. The seasons are short, and the greater number are employed only seven or eight months during the year.

When a girl decides that she will take up millinery as a

trade or a pastime the first thing to do is to decide where she will study, in a workroom or a school. The former is the old-fashioned way, and many still cling to it as being the better. As to schools, there are schools and schools, and each student must decide for herself which she prefers. Some schools charge a certain amount, furnish materials, do not limit the time, teach what a girl asks to be taught, and advertise to guarantee places. The latter clause is the most attractive, as every woman likes to find a place ready when wanted.

Then there are schools teaching a system—in nearly every case the Pratt Institute system, though changed somewhat to meet the requirements of the different schools and to suit the ideas of each individual teacher. The instructors give a certain number of lessons, teach a system during that time which thoroughly covers the foundation of the work, and charge a regular price for the instruction. The system generally comprises seventy-two lessons of two hours each, and the length of time taken depends on the number of lessons given during a week, some schools giving only two, some four, some five. The prices of tuition also vary, some schools charging as high as $30 for the entire course, others as low as $18.

Each pupil furnishes her own materials, which consist of canton flannel, cheesecloth, percaline or satine, and tissue paper for practice work. By selecting her coloring carefully she is able to make a hat or bonnet decidedly up to date. For the work on good materials she purchases what she prefers, after suggestions from the teacher, and what her purse will allow. The expense of the practice materials is $3 or $4, and usually three good hats need to be furnished in addition to the mourning work. The course embraces wiring; folds, bindings, and facings of all kinds; bows and rosettes; trimming; covering plain hats; making bonnets and small hats; black silk and crêpe work, and making of wire and buckram frames.

After a girl decides where she is to study she must go into the work with all her might—give her entire time to it

if necessary, read what she may see in the papers, visit the different millinery showrooms in the city, using her eyes well; practice out of class hours (as in no other way can she become sure of herself), make frequent notes and ask questions whenever in doubt. By the time she finishes the first course she, as well as her teacher, can tell whether it will pay to continue, and it is always well to have a chat with the teacher on the question of continuing or not.

When a girl has completed the course her first thought is to procure a place, and her school will always help whenever possible. Much depends on a girl's personal appearance. She should be neatly and plainly dressed, with scrupulously clean hands and finger-nails, a pleasant face and greeting, with some self-confidence. It is perfectly natural to shrink when facing something untried, but it must not be too apparent when applying for a place.

I have known many good workers who would have been perfect treasures to an employer had the latter only known it, but the applicants were so diffident and distrustful of their abilities that they were passed over, and those taken who had less ability but more confidence.

In nearly every case, after taking an entire course, the pupil is worth $6 a week, and many are worth $8. Some are fortunate in getting what they ask for, and others have to be content with less. Whether her wages are raised as time passes depends a great deal on herself. It will often pay a girl to work a month for nothing, as during that time she can gain a good knowledge of workroom life, and confidence in her own ability at the same time.

It is not always necessary to enter a workroom, as there are other ways of using her trade. If she is not wholly dependent on what she can earn, and has time to build up a home trade, it is very desirable, especially to one living out of, but near, a city. From one or two friends, who will recommend her to others, and so on, a trade will grow. It is more businesslike to have cards printed and hat tips stamped, and the extra outlay of money will pay in increased patronage.

If possible, the milliner should do the shopping for customers, for she will soon learn to know what they like and can afford, and can broaden her own ideas, besides saving them time. She can register at all of the stores where she intends to shop, and they will give her a discount—sometimes six, sometimes ten per cent. If she has a large shopping list she may go to a wholesale house, where she can purchase in small quantities everything in the millinery line, and in this way make something more than a discount.

Another way is to go out by the day, working from nine o'clock to five. Many families can make use of materials that are good, though having been used before, by hiring a milliner to do the work in their homes, thus having a greater number of hats at less cost, and trimmed to suit each person's fancy. The price for a day's work will vary from $2 to $4, according to her ability and quickness.

Another wishes to teach, but on this let me say, first, she should not think of money at all. If she feels that she can impart to others in a plain, simple way what she understands herself, will love the work for its own sake, and not for the money it brings, then go into it; otherwise, never take up that branch of the work.

In a teacher the chief requisites are patience, pleasantness of manner, and kindness to all. Never have favorites. She must gain the pupils' respect during the first lessons, and then she can depend on them to do their work to please her.

A good way of beginning this part of the work is in the mission schools, which pay $1.50 a lesson. Private classes are also practicable, if one has a room suitable for the purpose. The charge for a lesson is usually from fifty cents in a class to $1 for a private lesson.

No one must think that after spending only a few months in studying she is finished, and will make a success in the first venture. Every season brings something to learn. One must not allow herself to get discouraged, but work on steadily, and success will surely come to her.

Wages of Milliners

Three dollars a week appears to be the lowest price paid anywhere in a millinery establishment or in the millinery branch of the department stores. This is almost invariably for the very young girls of the "office boy" and "cash girl" type, and is probably as much as girls of the same age earn elsewhere.

To those who are actually milliners of different degrees of experience, the weekly pay varies from $5 and $6 a week to about $10 and $12. Most of the girls will probably never rise above the latter amount of compensation, because they merely want to earn a living while waiting for the almost inevitable marriage, and having no especial talent for color and design.

Really good milliners, who enter with all their heart into the enjoyment of creating new ideas in hats, and who have sterling common sense, energy of management, and the knack of the artist, may reasonably hope in time to be placed in charge of a department in the store, or, under the direction of the proprietor, to superintend the whole operation of the work in a regular establishment. Such women can earn excellent salaries. Beginning with from $12 to $15 a week, they may hope to rise to $20, $25, and even to $30 a week, as forewomen.

When a forewoman becomes worth $25 or $30 a week the proprietor is dangerously near the point of losing her. It all depends on the forewoman herself. She may become a proprietor herself, if she has saved enough money to begin operations on her own account and has the courage to undertake them.

Dressmaking

SEWING is a universal feminine accomplishment. Any woman may learn to sew and to fashion simple garments. Most of them do.

Among the poor, thousands turn to common sewing as the easiest thing for a living, not realizing the important business fact that those who attempt the easiest things always meet the most competition and have to submit to the lowest wages. Many, being without ambition, or too tired at the end of each day's work to improve themselves in their calling, never fit themselves to execute the higher classes of work, which pay better.

Almost any woman may be taught the trade of dressmaking, but to become a really good dressmaker is not so simple a matter. Ambition to advance, a natural taste, the instinct for decoration, a correct eye for color, and some artistic ability must be inherent. Intelligent and thorough cultivation of all these qualities is as necessary to a training as a special knowledge of cutting, fitting, and putting together materials.

There are two ways of learning the trade of dressmaking, which is the higher branch of the art of the seamstress. A girl may go into a shop and be gradually promoted from the lowest to the highest grade. This is a slow process, at the end of which she may know as much as the particular dressmaker under whom she has been educated, but no more. Or she may take a regular course of study at a reputable school. There are charity classes for seamstresses who can-

not afford to pay for learning to sew, but these rarely take the student beyond the most simple forms of garment making.

Before entering a school of dressmaking it is necessary to know enough about sewing to be able to cut from a pattern and make an unlined dress. To one able to devote her whole time to class work, the course may be completed in one school year of nine months. The student is fully instructed in the underlying principles of the trade, and is required to make her own dresses, in order to apply the principles she has learned. As soon as she is proficient enough she is set at work on dresses ordered from outside of the school. A course in freehand drawing and water color, while not absolutely necessary, is highly beneficial to any one who aspires to make a name in the art; in some schools it is obligatory. The advantage of being able to express ideas with pencil and brush is easy to understand.

All schools follow about the same line of instruction, and the course at Pratt Institute, in Brooklyn, N. Y., may be taken as a good example of the whole. There the course is as follows:—

FIRST GRADE

Draughting and making walking skirt.
Cutting, fitting, and making lined skirt from pattern.
Study of color, form, line, and texture.

SECOND GRADE

Draughting and making lined waists.
Matching stripes and plaids.
Study of artistic and hygienic principles.

THIRD GRADE

Draughting and making a princess and an evening dress.
Study of contours and poise of the body, as essential to artistic dress.
Color and texture for house and evening dress.

FOURTH GRADE

Draughting, cutting, and making jacket.
Draughting child's dress and coat.
Study of woolen textiles.

COSTUME DESIGN

Practice in the use of pencil and water color.
Appearance of objects, bows, gowns, and drapery.
Outline and proportion of the human form.
Study of historic costumes, designing of gowns.

The cost of tuition at Pratt Institute is $75 for the nine months. The student works from 9 A.M. to 1 P.M., and from 2 to 5 o'clock in the afternoon every day except Saturday and Sunday. Her expenses, besides tuition, are for board and a certain amount of money to cover cost of the materials in which she works. Part of this expense may be defrayed by making garments for others.

After a girl leaves the school she usually endeavors to find a position in a first-class dressmaking establishment, and these are quite numerous in large centers of population. It is not always possible to obtain prompt employment in such a place; but if it is effected the young dressmaker has the advantage of being able to work in fine materials and acquire experience in designing handsome and fashionable gowns. Many girls go into the department stores, others find employment in the making and alteration of dresses in private families.

The salaries paid in shops are not large, as a rule. A good skirt woman gets from $6 to $12 a week. A waist trimmer receives from $9 upward. Waists call for all the originality and ingenuity of which a dressmaker is capable, and an expert in this branch is always sure of a position.

If a dressmaker has business ability she may venture to open an establishment of her own. As to the possible earnings of an employing dressmaker, little can be definitely said. In a small town the prices asked for the making of a gown, however skillfully the work be done, must always be lower than in a large place. At the same time the expenses for rent, board, and help will also be less. Again, success in any line is largely a matter of personal qualities. A woman might be a second Worth or Redfern, and yet not possess the ability to attract and retain customers. Dressmaking may be made a profitable occupation if industry,

ability, and honest endeavor to please and do justice to each individual patron are taken for granted.

The woman whose good points are emphasized and whose defects are hidden by her clothes owes a debt to the dressmaker which she is quick to perceive, and which she ought to be willing to reward liberally. Regular customers are not won at once, and the first year or two of the dressmaker's career may not yield a large profit. After that she may hope to make a fair living. A well-trained, tactful, industrious woman may expect to make from $1000, a year upward, depending on the community in which she lives, and the number of patrons to whom she gives decided satisfaction. A number of women in Boston, New York, Chicago, and other large cities have made what must be regarded as fortunes.

Wages of Seamstresses

With seamstresses and dressmakers, as with milliners, wages vary with the abilities of the worker.

In the far West, where for half a century women were far fewer than men, and where they are yet numerically less than the hardier sex, they earn slightly better pay than in the more crowded East.

In the East the lowest rate of weekly pay is from $4 to $6. Experience and excellence of workmanship bring rapid promotion. Probably $12 to $15 is as much as any worker can expect who has not yet risen distinctly above the mass of her fellow-workwomen.

Forewomen in stores and dressmaking establishments may expect all the way from $10 to $15, $20, and $30 a week. There are cases where forewomen earn $40 a week. But what should prevent a woman who is worth $40 a week from setting up her own establishment is a mystery, unless it be her delightful freedom from the cares and ups and downs of business enterprise.

OPPORTUNITIES FOR WOMEN

Competent Proofreaders

By THEODORE L. DE VINNE

IN regard to the business of proofreading, allow me to put in my protest against the assumption that proofreading is a trade that can be acquired in a few weeks or months by any one who has a fair education. It is a mistake to assume that the principal duty of a reader is the correction of errors of spelling and punctuation. There are scores of graduates of colleges—men of learning and ability—who have unsuccessfully tried to read proof in book houses, who will certify to the correctness of my assertion that much of the knowledge required of a good proofreader is not taught in the schools. Neither is it laid down in books, and it can be acquired only by practical work when the student is young and willing to do the drudgery of literature.

I make, however, no objection to the employment of women as proofreaders. Our house has women readers and is well pleased with their work. They have also the approval, and often the commendation, of exacting authors. They are successful because they have been trained as typesetters, and have qualified themselves by continued reading and study after work-hours.

Art Pottery

By F. VANCE PHILLIPS

THE most important and impressive characteristic presented by ceramics is its absolute permanence of color, and truly if an artist has anything worth recording it seems of great importance that that record should be made in as permanent a way as possible. Mineral color, fired and incorporated with the glaze, on a clay body, is the one unchanging expression of color. Neither moisture nor heat nor cold nor the sunlight of a thousand years will serve to change or vary in the minutest degree that which fire has fixed.

Artists generally are inclined to feel that they would be handicapped in their expression through this medium. Perhaps it is felt that clay forms—merely having a form, be that form vase, tile, or plaque—are something of a barrier to spontaneous development. But, on the other hand, these forms in and of themselves frequently suggest and invite an expression or treatment. Then again some of our coworkers have hesitated in giving their sympathy because this branch has been looked upon as capable of receiving only conventional treatment. On the contrary, the porcelain surface is most elastic in its generous invitation, both to artist and artisan, to the face-worker and to the conventionally trained hand.

One may give expression to the freest and broadest thought, perfectly untrammeled, or, on the other hand, may demonstrate to a nicety of perfection his skill in tech-

nical work, purely mechanical work, or, indeed, these classes may be combined with great satisfaction in one production.

Surely no other surface offers more alluring diversions than this. As a matter of fact, porcelain is most responsive to sympathetic treatment.

In viewing this art, not from a decorative but from an artistic point of view, from that broader field which encourages all spontaneous expression, it presents great possibilities. To the artisan it presents a field full of scientific and mechanical problems which are ever open to solution. He may have his fullest sway, if he cares to take advantage of the numerous opportunities in the fusing of metals, or in the etching of forms and designs with acids. As yet these conventional suggestions smack of the factory, a word despised by the American decorator.

It is to be hoped that this American decorator's individual growth will be assured before factories take possession of the clays of our country. This factory influence is what we are trying to shake off, what we are trying to outgrow.

What we need is good workers, students well trained in our best art schools. The china painter is fast learning that his position is measured and settled by his actual knowledge of art principles. This is as it should be. Among those who frequent the ceramic studios of New York there are no more welcome students than those who come from the league and from the schools of applied arts, to gain a technical knowledge which they wish to apply in their own way. Yearly we note that the workers who are gaining ground are those who are properly equipped, those who are trained to see broadly, to have the largest idea of the unfolding of the power intrusted to them. We need students of strong personality, of boldness of expression, of spontaneous enthusiasm. These will leave an impression and gain the respect of the whole world for our art.

To be sure, we have a few of such workers—too few as yet, so that they stand out preëminently in ceramic circles —who prove to us the absolute importance, not only of gen-

eral art education and general attainment, but added to these a happy enthusiasm born of love for the work.

We almost make a plea to the overcrowded ranks of other professional lines, perhaps to those who ordinarily enter illustrative and designing fields, and show our hand by dropping a bait in the shape of commercial opportunity.

The women who have been most successful in ceramics from a financial point of view have been those who were primarily teachers. The college-bred girl, with the all-round knowledge such advantage should have given her, supplemented by a course in art, should be a better teacher and produce better things than would be possible to her without this training. The girl who wishes thoroughly to equip herself for ceramic painting, seeing in it a field for earning money, should first choose the style of work she wishes to take up, then fit herself for it. Should painting prove more attractive than purely decorative work, the same knowledge of perspective, drawing, and composition will be required that is necessary to an artist who uses oil or water color as a means of expression. This is best supplied by a regular course in an art institute. If decorative painting be the choice, a course in designing will be admirable, requiring from one to three years, during which time old porcelains may be made a special outside course of reading.

Intervals during the regular school course may be used in either case to gain a knowledge of the variety and quality of porcelains, the use of mineral colors, and the art of fixing these colors with fire.

For a girl thus equipped and possessing the enthusiasm for her chosen profession that every successful teacher must have, I bespeak success. If you are not possessed of means to take such a course, you will need to make your start in a private studio, along the lines of advice given later on to the teacher who must in a short time be a breadwinner.

Even under these conditions it is possible to be successful. You will be happy in choosing this art, that appeals so generally to the naturally refined taste of the American woman. Her wishes are to be mainly considered, for it is

she who will be almost exclusively your buyer and your student.

Do not lose sight of the fact that you have chosen a profession to succeed from a financial point of view. Therefore do not try to be a great reformer, but rather try to be helpful to all who come to you, meeting each individual wish and putting yourself in sympathy with your patron and your student.

The American woman as a student will come to you for knowledge of an art that will be to her possibly a pleasant pastime, possibly a means of satisfying a craving to create something beautiful, but oftener to use the knowledge as a means of earning money.

The first-named class of students are, as a rule, delightful. Possessing tact, you will assist these to do happily what they wish to do, making the doing of it a delight. Failing to make the hours employed pleasant ones, and the productions satisfying to the student, you have not grasped the situation. The second class are willing to be more or less earnest students, and to them theories of art and its mission, as well as exact technical knowledge, may be freely and satisfactorily given. These students are willing to study art for art's sake, and should be given as much thorough training as the time at individual disposal will permit.

The third class, those who are endeavoring in as short a time as possible to enter the list of wage earners, require special consideration. As a rule, the utmost you can do for one of these is to help her to paint a considerable number of pieces representing a variety of styles. She will probably wish to copy these from your finished productions in order to get, in the briefest time, the necessary pieces of china for the opening or the freshening of her studio. This is not, most likely, what you would prefer to do, and perhaps your student is capable of much better, capable of doing good, original work; yet in helping her to do what she needs you find your opportunity to encourage her to go to nature for her inspiration and to suggest to her how to study composition and designing. Give her the best you can of what she

needs for immediate use, and plant seeds for a better growth. For a time the most this teacher can do for her pupils is to have copies made of what she has painted with you. Later she can give them an idea of the seeds you have planted for her, and so make not only your studies and designs helpful, but your teaching far-reaching and productive of much good.

Ceramic art has a right to live, and will live, will keep records of thoughts and impressions, records historically. If a great thought is to live at all, it is meet that it should be carried out in a permanent form. We have no more permanent expression, either in the world of art or of letters. Why not, then, encourage it, develop it, progress with it, for as Goethe has said, "Whatever is good by God's will is permanent."

OPPORTUNITIES FOR WOMEN

Bookbinding

By EVELYN HUNTER NORDHOFF

IT has been asked whether bookbinding has proved an occupation suitable for women, and whether it pays. The best answer to these questions is an explanation of the conditions of the work.

Bookbinding is not to be learned in less than six months, and this means regular work, six days a week, five hours a day. Even after six months' steady application no teacher would be willing to say that he could turn out a finished and competent workwoman ready to take her place in the competition of the trade. At the end of six months the teacher has simply done his part; the rest lies with the pupil alone.

After preliminary training, the chief need on the part of the pupil is perfection of technique, which in such a craft is to be attained only by constant and uninterrupted repetition of processes. This alone disposes of a large class of women, who either will not or cannot give steady work or time—women who do not care for any work which exacts steady application at the sacrifice of amusements or other interests.

Bookbinding is wholly unsuited to women seeking a light accomplishment to be picked up or dropped at will. The outfit for such work as a woman would do in a small shop where no steam or patent machines are used and all processes are done by hand, in short, what the trade calls a "garret binder," costs $150. The outfit is a much less

serious matter in New York than the cost of rent. A good-sized room, with plenty of light (not overhead studio light), and a floor which may be treated with utmost disrespect, are necessary for a workshop. If a woman asked my advice I would suggest making a combination, if possible, with some other binder, and thus reduce the cost of rent, which is the great bugbear of any workingwoman in a city like New York. For this reason such work seems to be especially suited to a woman who already has a home provided for her; who has a father who is, perhaps, able to help support her while she is preparing herself for her future work.

Bookbinding is not promising to poor women, or to women who have an income but who expect to reap some return as soon as they begin to work.

The running expenses of leather, paper, thread, glue, the books to be bound and other items are not small. Compared with the working material of the writer it is large, while compared with that of the painter it is moderate. The cost of the requisite six months' tuition in this country is about $450; in England it can be learned for possibly half that sum, but with the extra expense of going abroad it amounts to about the same thing. The experience of living in such a place as London, however, is so stimulating to all one's working powers, the atmosphere is so suggestive, so serious, that when it is possible I strongly advise study abroad. I believe the art cannot be learned there in less than a year.

Granting that a woman begins with a real vocation, a love for the work and a determination to learn, the main quality needed is patience; the patience which comes with the temperament that loves "pottering"; the patience which loves fine and delicate work, that causes absolute exactness; the patience that is willing to go over and over one operation until the necessary exactness is secured. Exactitude of mind is not a common feminine attribute. Exactness is usually the last thing she masters by training, and its possession is absolutely imperative to the good bookbinder. It is a quality acquired by habituating oneself from the start to

observe the difference between an eighth and a quarter of an inch, and to regard the same as a matter of vital importance. Once this is grasped, it seems to me, it is no more difficult for a woman to succeed than for a man. There are certain men and women to whom exactness is an impossibility. To the woman so constituted bookbinding is unsuited.

With correctness of eye, exactness of habit, patience, and a certain amount of feeling for color, harmony, and design, and a real love for the work, I should say, without hesitation, that a woman can go far in this line and make a decided success.

To sum up, bookbinding is suited either as an accomplishment or a money-making occupation to only a small class of women. To the minority it is eminently suited. To the woman tired of "gadding," and whose circumstances allow her to give a certain number of hours daily to some serious occupation, and who has enough money to spend without needing any return, and who loves books: to such a woman I would say, "Bind books, and you will find the utmost delight in clothing, to suit yourself, your favorite authors."

To the woman who wishes to earn a good living and who can afford the training and wait for success, let me add: "Go ahead, and success will come."

THE MAKING OF BOOK COVERS

Since Miss Nordhoff's death her work has, in accordance with her last wishes, been continued by two of her pupils, Miss M. Pratt and Miss Florence Foote. The designing of book covers for the trade, which is a branch of the bookmaking art, offers a field of work for which women seem well adapted, but for which, as yet, the proper training is difficult to obtain. While schools of design offer courses of general study, none devote attention especially to book covers, and, according to the publishers and bookbinders, the present courses are not satisfactory.

Four women, at least, have made marked successes in

this field, however. Mrs. Whitman, of Boston; Miss Margaret Armstrong, Miss E. Redington Lee, and Miss Amy Richards, of New York, have designed many of the best book covers used by such houses as Houghton & Mifflin, Harper's, Scribner's, and Dodd & Mead. These young women attribute their success mainly to their thorough training in drawing and their practical knowledge of the requirements of bookbinding. The latter are by no means easy to ascertain. The school established by Miss Nordhoff is the only one in the country wherein a woman can learn anything more of bookbinding than the simple stitching together of leaves. The Bookbinders' Union excludes women from the higher branches of the trade.

The prices paid for book cover designs average $15. The demand is hardly large enough yet to encourage many women to look to it exclusively for a means of livelihood, but supplemented by designing of posters, advertisements, magazine covers, and borders, a very fair amount might be realized annually.

OPPORTUNITIES FOR WOMEN

Small Manufactures

FEW women have as yet built up manufacturing enterprises of their own. Quite a number have fallen heir to established industries and conducted them with success; but the women who start factories of their own are not numerous. There are a few, however, who have done so, having stumbled into the occupation by accident, or having been led into it by need or their own ingenious inventions.

Some of the small industries scarcely rise above the level of drudgery pure and simple. Soft soap making was once quite universal. The commodity was in extended use, and many a farmer's wife added to her pin money by selling a barrel of soft soap in some neighboring city every year, in the "good old times." In modern days a few women have undertaken to make fine soaps for fastidious families. The process is not difficult, and affords a fair remuneration.

Basket weaving is now left generally to rural workers; but there are a number of factories in which women can earn about $5 a week, and some of them are conducted by women.

Glove dyeing is a good business, and is followed by many women. One case is known of a poor widow, who was forced by necessity to dye her dress black after her husband's death, and who did it so well that she soon found herself profitably employed in dyeing dresses for others. She supported herself for years from this industry, employing such assistants as were required.

The desire of many families to buy only the purest of candies, and the fact that homemade confectionery is usually more agreeable to the palate, has opened the way to women in almost every city to add to their earnings by supplying caramels, chocolates, and other wholesome dainties. In these instances little is required to convert the business into a regular industry. The sale is usually best during the holiday season.

Mme. Demorest made a fortune in the manufacture of patterns. It is true that she had a newspaper also, but that publication was merely an adjunct to her pattern industry, which was built up to enormous proportions.

The Patent Office at Washington is full of applications for patents by women. Games, notions, baby carriages, sewing implements, tools, and a thousand and one small things are patented by women. In many cases the manufacture is carried on by them on a small scale. A smart idea can be sold at all times to those who already manufacture kindred commodities; and more than one woman has assured her bread and butter for life by such a sale. But there is sometimes more money to be made by manufacturing for oneself. This must always be a matter of judgment.

Capital, a shop, and perhaps a partner, are necessary, if a woman intends to manufacture on her own account.

Umbrella making was at one time a suitable field for women. In these latter days women appear in the industry mainly as employees, and earn from about $6 to $14 a week.

Many women earn a living by making knickknacks for holiday presents, illustrated blotting pads, etc.

Photography

By S. G. ROCKWOOD

IN my long career as a photographer I think I have proved my faith by my works in employing women in every department of my business in which they are available—everywhere except in the handling of large cameras in outdoor work.

In the first place, women are peculiarly fitted to occupations in which there is much detail. This is in strong evidence in the sphere of the household, where good housekeeping is another name for the careful doing of many little things.

Photography is a mass of detail to which few men are fitted, and, at the best, are never equal to women. I might say that men who are good at small things never accomplish great ones.

Secondly, women are more conscientious in the performance of all little things—even where men are capable of it—than men are. Now that the "silvering" of photographic paper is no longer done to any great extent, and the sensitized sheets come to us in gross packages ready for the printer, it is no longer "dirty work." But even under the old auspices I employed a woman as head printer for nineteen years, and have never had her superior in neatness, quickness, and reliability. In fact, her pupil is now my head printer, and has been for these twenty years.

In photography there is room for almost every grade of ability, from the simplest work of "pasting" the photographs, through to the elaborate finishing in water colors, India ink, etc.

The one trouble we have had is the lack of the idea of permanency in the work. Almost every young girl goes into photography as she does into another trade or business, as a stepping-stone to matrimony. This is a handicap to their proper education or fitting to the higher branches of the art.

If a man marries, it does not necessarily change his occupation, but it is ordinarily an incentive to advancement in his art or work. Women when married rightly expect that they are to be no longer breadwinners, and rarely pursue their occupations with the earnestness and intensity that they would if the idea of marriage were not constantly before them.

This, I say, is the reason why there are not more really skilled women in the higher branches of the art—the artistic work. If they looked forward to their occupation as a life work they would acquire a skill in all departments of photography to which men could not attain. I say this in shame for my own sex, and in thorough appreciation of our heaven-blest gift, women. I am not a celibate, and am not advocating the celibacy of women, but only explaining the reasons why I think women are not almost solely used in photography.

Speaking to a distinguished coadjutor one day, I asked why he didn't employ women. His answer was, "The good ones are always getting married."

The departments of photography where intelligent girls can find occupation are principally in the mounting, spotting, and finishing of photographs. Here they quickly learn the ordinary routine of the work at salaries beginning at, say $5 a week, and rising to two or three times that figure, depending upon their intelligence, industry, and memory—for the latter element is a desirable one in keeping track of orders without reference to the books. All the work in this department is light, varied, and interesting. The hours in my

establishment are from 9 A.M. to 5 P.M., with sufficient time for luncheon.

Another department is the retouching of negatives. This requires some technical skill, which is soon acquired by one with an intelligent brain and artistic temperament. Some of the best retouchers I have ever had have been women; but here the first-named peculiarity, non-permanency, is frequently an obstacle. At the school of the Young Women's Christian Association, and also at some of the art schools, Cooper Institute, etc., excellent instruction has been given in the retouching of negatives. After a sufficient course of study, from six weeks to three months, a term in the practical working of a photographic establishment brings the student to a possible living. Most photographers will loan rejected negatives for practice, if the negatives are safely and promptly returned.

The criticisms of the photographer should be a sure guide. Much artistic taste and judgment can be exercised in the work on a negative, and, strange to say, he or she who can modify the lines of a negative without obliterating them, and who can do a little with intelligence and judgment, more completely fills the requirements of a photographer than the one who expends too much and almost always unprofitable time on the negative in making it too smooth, and, as we express it, "too puddeny."

Nearly all retouchers now work by the piece and receive from twenty cents to $1, depending on the quality and size of the negative. When employed by the week one should receive from $8 to $20.

Then, in the office or gallery, women find a sphere where they are unapproachable. In all business transactions where the amounts involved are not of great importance I have found that women are the best sellers. Generally they give the impression of absolute honesty of purpose and a sympathetic desire to forward the interest of their client or customer; and, say what you will, there has always been on the part of the great mass of people—men more than women—a certain undefinable hesitation—shall I call it timidity?—

concerning the facing of a camera; and, on general terms, women in the gallery succeed in overcoming this peculiarity and securing confidence, especially of children.

Now as to the pursuit of photography as a business or profession. Sex has nothing to do with it, although it seems to me to be a pursuit that is particularly adapted to women, but must be prosecuted with the same enthusiasm, fidelity, earnestness of purpose, and study as any other line of work.

It is not learned in a day, and photographers are not born, any more than are artists or professional men. To attain a high excellence is the work of years, embracing the study of many things. There is no royal road to success. After a quarter of a century I every day learn something new, and each day seek greater excellence.

Photography is not strictly mechanical. It calls for the best and most varied powers of the best endowed.

I was once asked what my ideal of the photographer was, when I replied: "The best photographer is one who is most a Chesterfield in his manners, a Bacon in his range of information, a Rembrandt in his art, and a small edition of Shakespeare in his knowledge of human nature, all blended with the genial humor of Dickens." As sure as the chameleon reflects the hue of its surroundings, so is the sitter to reflect in some measure the mood and warmness of the photographer who sits him.

Now, while there is all this in favor of women seeking occupation in photography, there is one thought which may not occur to some, and that is the limited opportunities afforded. One photographic gallery supplies a large community, and but few employees are required in the ordinary establishments; that is, the proportion of photographic galleries is small compared with any other business. I employ in the various departments at the present time from twelve to fifteen women, some of whom have been with me for twenty years.

OPPORTUNITIES FOR WOMEN

Trained Nurses

By IRENE H. SUTLIFFE

THE profession of a trained nurse is one of recent development, and one that is especially attracting refined and earnest women at the present time. To the sympathetic woman, though one of the most trying of occupations, the work of a nurse is bound to become fascinating because of the good it does and the personal confidence that employment implies. Wages are far better than in most fields in which women are employed, and the capable nurse who has gentle and refined manners is pretty sure to have employment most of the year. Physicians do most to secure such employment for women whom they can trust. There are hundreds of young women now fitting themselves for the work.

The New York, the oldest hospital in this city, organized its training school in 1876. Miss I. H. Sutliffe, director of the Training School, succeeded Zilpha E. Whittaker in that office in 1885.

The other training schools connected with hospitals in New York are: Bellevue, established in 1873; Blackwell's Island, in 1875; Mount Sinai, in 1881; the school of the German Hospital, in 1885; the Post-Graduate School, in 1888; St. Luke's, established in 1888; the Presbyterian, in 1892; St. Vincent's, in 1892; the Red Cross, in 1894; and the Roosevelt, in November 1896.

In addition to these schools the Cancer Hospital and the

Woman's Hospital have post-graduate courses of six months for trained nurses. Mrs. Anna M. Lawson, a graduate of the New York Hospital Training School, is superintendent of the Cancer Hospital, and was the first woman ever appointed in this city as superintendent of a hospital. Miss Frances E. Fowler, of the Woman's Hospital, was the second. The superintendents of the training schools exercise a supervision of the hospitals, but are not designated superintendents of those institutions.

In order to obtain admission to the training school of any good hospital the applicant must be of good character, in sound health, and have a good common school education. A candidate whose references show that she has these qualifications may be accepted on probation for a term generally not exceeding two months. During the probationary term she is carefully observed, and if she gives evidence that she possesses the qualities that are essential for a nurse she is accepted as a pupil.

Among these qualities I regard earnestness as perhaps the most essential. A woman may be strong, intelligent, and well educated, but if she evinces no realization of the nobility of her calling, no desire to maintain a high standard in it, she would not be accounted worthy of acceptance. The nurse must have a fine sense of honor. Both in the hospital and private practice she will necessarily be the recipient of many confidences, of family secrets, which she must regard as sacred. She must be sympathetic, gentle, patient.

The invalid may be irritating and unreasonable, and the nurse may be very weary, but she must not give way to irritability. She must be tactful, self-forgetful, considerate. Candidates otherwise satisfactory have been rejected because of lack of consideration for others. She must not be absent-minded. No dreamer can succeed. She must think quickly, clearly, put her thoughts promptly into action, and control her nerves, or she will fail in an emergency. She must know how to make her head save her hands. Of course, the training develops these qualities.

Accepted probationers must be between twenty-three and thirty-three years old. When accepted as nurses in training, members of the junior class in the New York Hospital, for example, receive a monthly allowance of $10; those of the senior class, $13, and those of the head nurse class, $16. Board, lodging, and washing are furnished without charge, and in sickness all pupils have gratuitous care. The nurse, therefore, has the benefit of a training free of expense, and she is self-supporting from the beginning.

Classes graduate in March of every year. The course of instruction extends over three years. It consists in part of lectures on the general principles of nursing; the observation and recording of symptoms; elementary physiology, anatomy, and hygiene; materia medica, massage, and a course of gynecological nursing. Practical instruction is given at the bedside on the dressing of wounds, application of blisters, fomentations, poultices, cups and leeches; bandaging and making of rollers; making beds, changing drawsheets and sheets; moving patient, preventing bedsores, etc. Nurses are held responsible for the orderly condition of their wards, which includes the care of linen closets, etc., and in addition to actual nursing must attend to many details connected with the charge of patients.

Our nurses serve a term in the diet kitchen, and learn to prepare broths, jellies, light puddings, and other dishes suitable for invalids. They have a term of emergency service in the House of Relief, at Nos. 67 and 69 Hudson Street, which is connected with the New York Hospital.

The hours in the wards for pupils on day duty are from 7 A.M. to 7 P.M.; for those on night duty from 7 P.M. to 7 A.M. A rest of a few days is always given to pupils after a term of night duty. One hour daily is also given for rest, besides one afternoon weekly and half of Sunday.

It has been said that the work of the trained nurse in active service is so exhausting that a large number break down, and alarmists have given the limit of such service as ten years. That this is a mistake is proved by the fact that many trained nurses who are in excellent health have been

actively engaged in their profession for a much longer period. Of course, if the nurse disregards the demand of the body for reasonable rest, if she is careless of her health in other respects, she will break down, as women in other professions break down.

In well-regulated hospitals, though the hours are long and the work is hard, the regularity and system are conducive to good health. The diet is nourishing and simple; due regard is given to rest and recreation, and a large number of pupils in training become stronger during their term. Women of the leisure class, who had lived without any special aim, find new interests on entering the training school, and fancied ailments disappear.

It is sometimes stated that the profession is overcrowded and that many nurses are without employment. In nursing, as in other vocations, there is always room at the top. An unselfish, earnest woman, with pleasing manners and a thorough training, will find as much work as she can possibly undertake. The best nurses are frequently obliged to refuse cases on account of their other engagements. The compensation for nurses in private practice is $25 a week.

Graduate nurses from several training schools have written works connected with their profession, which are used as text-books.

Bellevue Training School, established in 1873, is the pioneer school of New York State, and points with justifiable pride to an honorable roll of women who have distinguished themselves in their vocation, and have served as superintendents of schools and matrons of hospitals in this country and abroad. Blackwell's Island Training School was opened in 1875, and the New York Hospital School was the next in order. Our first class was graduated in 1878.

Our alumnæ association numbers two hundred. Its meetings are held monthly, for social intercourse, as well as for the discussion of subjects in relation to the work and interests of the trained nurse.

The training school endeavors to keep in touch with all of its graduates. Some have married and no longer practice

their profession. Many have traveled far, but we rarely lose communication with any one. They want to hear of the beloved hospital and school, and they write of their joys and sorrows, their prosperity or reverses, assured of sympathy and interest from former teachers and companions. There is a class feeling among nurses, a love of alma mater kindred to that which exists in graduates of other schools and to which is due much of human kindness and helpfulness.

Girls in Clerical Work

By S. S. PACKARD

SOME thirty years ago it came to me that many business houses in New York were badly served in clerkships, owing in no small degree to the fact that good, capable women were not employed in the place of incompetent and inconsequent boys; and I thought it might be worth the effort to do what lay in my power to change this condition. This was before the introduction of the typewriter, and before the proved utility of the office stenographer. I accordingly advertised through the best mediums, reaching the city and into the suburban places, for fifty intelligent and courageous young women who would accept a business training at my hands and hold themselves ready for such positions as might offer. In response to this appeal I obtained thirty girls and young women, ranging from eighteen to thirty-five years of age. I proposed to educate them at my own expense and to supply them all with paying situations. They were zestful and ambitious, and soon removed any doubt I had as to the good results which might follow. Comparatively few came from the country, and they were all self-supporting women or those who desired to be such. None sought the instruction merely as an accomplishment.

As soon as I discovered the particular qualities of individual students I opened a correspondence with business houses, selecting those most likely to require the kind of service that women could render. These were publication

offices, lawyers' offices, and the class of retail mercantile houses in which I felt sure good places could be eventually secured. I simply said to these possible employers that I had at command a number of well-proved, efficient women clerks, who were not only able to work, but willing to do so, and who could readily supplant inefficient office boys and young men who depended upon their sex to hold their own as against women of whatever qualifications. The result was that I had no difficulty in placing every well-qualified girl in a paying position.

The most gratifying thing about the whole matter was the sense of thankfulness which was awakened in the hearts of the employers. It was discovered that there were ever so many things in and about offices that were supposed to be within the scope of young men alone that could be done quite as efficiently and appropriately by girls; such, for instance, as managing office details and taking charge of department work. In a number of instances my bright girls developed into competent managers, and in a few cases, now vivid in my memory, achieved distinguished success as executive officers in houses where they began as subordinate clerks. The advent of the typewriter opened a new and limitless field, and I had the great satisfaction of placing the first girl stenographer in business. This line of employment, as is now so well known, was especially adapted to the clear brain, quick fingers, and methodical habits of the resourceful girl, and it is not at all strange that it has grown to be almost exclusively "woman's work."

To such an extent is this true that it is difficult to find young men willing to undertake stenography as a profession, and so to-day one of our chief difficulties is to fill the places that are open and so full of promise in the way of advancement, for it goes without saying that there are many stenographic positions which can be filled only by young men.

One of the deplorable results, however, of this demand for young women as stenographers has been the precipitation upon the business community of a horde of half-qualified girls, who get a smattering of instruction in schools and otherwise,

and push themselves into places which they are wholly incompetent to fill. A feeling prevails among the unthinking that to be able to manipulate typewriter keys and "take down" from dictation at an assumed speed cover the requirements in this department of work, while the fact is that there is probably no clerical position in which brains count for so much. To be the accepted medium of communication between the business or professional man and his correspondents is to be a trusted and faithful employee, and any degree of aptness, intelligence, or fidelity is sure to meet its reward.

In spite of the plethora of applicants for stenographic places, there has never yet been a time, and is not likely to be, when competent female stenographers will not be needed, and in all my experience as an instructor it has never been difficult to place a competent stenographer. Let it be understood at the outset, however, that a competent stenographer can never be measured by the ability to write a hundred words a minute, without understanding them, or manipulating a machine, however deftly, unaccompanied with the sense which renders the work acceptable.

The question of most interest to the seeker of profitable employment pertains undoubtedly to the cost of acquiring competence, to the probability of being able to do the work, and to the place which can be secured, and these questions are all difficult to answer so that they will fit individual cases. To those who are able to stand the expense the surest and best means of becoming expert stenographers is through the best schools, and it so happens that in all parts of the country, and especially in our large cities, there are well-conducted, efficient schools where the learner, having inherent qualifications and a fair English education, can eventually count upon attaining to proficiency of the highest order. It is within the scope of efficient teachers absolutely to fit the student for the most exacting duties of stenographic work, and it is not impossible for an energetic and intelligent young woman to acquire the art through private study, with such assistance as may easily be had from practical stenographers.

As to the pay for acceptable work, the chances are perhaps better in this field than in any other where women are generally employed. No proficient stenographer, even without large experience as such, need work for less than from $8 to $10 a week at the start, and that with an assurance of steady advancement. The rates paid for good stenographers in the best business houses to-day vary from $10 to $20 a week, and there is possibly no line of work in which women can engage having a fairer prospect of leading to something even better.

There are, of course, many desirable openings for girls as mere copyists on the typewriter, where a knowledge of stenography is not absolutely required. The chances for advancement, however, in these places are very limited. No woman should undertake the study of stenography and typewriting until she has a good use of her mother tongue, both spoken and written. With that knowledge added to general intelligence—the more the better—and an earnest determination to be thorough, there can be no doubt of her success. It should be added that pupils beyond the ordinary school age are likely to have some difficulty in acquiring the manual facility necessary, unless the training of mind and hand has been continued after the school days are over.

However, even those who fail to become very rapid writers sometimes more than make amends for this deficiency by good judgment, carefulness, fidelity, and general reliability.

OPPORTUNITIES FOR WOMEN

The Teacher

By ROBERT WATERS

[Robert Waters, author and educator, was born at Thurso, Scotland, in May 1835. At the age of eight he came to America. Early in life he worked in printing offices in Montreal and New York, meanwhile studying English branches, together with the modern languages. In 1861 he went to London, and the next year crossed to France where he taught English and German at St. Quentin, Picardy. In 1863 he began teaching English in the Commercial School, Offenbach-on-the-Main, Hesse Darmstadt. In 1867 he returned to America and taught in the German-American schools in New York. In 1868 he went to teach in the Hoboken Academy, a position he resigned in 1883 to become principal of the West Hoboken public schools, which post he still holds. He is the author of "Intellectual Pursuits," "Life of William Cobbett," "Cobbett's Grammar," "Shakespeare, as Portrayed by Himself," "John Selden and His Table-Talk," "Flashes of Wit and Humor," and "Culture by Conversation," and has translated "Magical Experiments, or Science in Play."]

THE first thing to be done by one who wishes to become a public school teacher is to obtain a certificate, or license to teach; for no person can draw a salary as a teacher in a public school unless he or she has obtained a certificate, which guarantees that the applicant has acquired the knowledge necessary to be able to teach. This knowledge may be acquired in any school, or in no school. All that is required of the applicant is that he or she be of good moral character and at least eighteen years of age. Most of our public school teachers graduate from the public school, which shows that the knowledge obtained there is sufficient. When I say the public school, I include of course the high school and the normal school; though many teachers never enter

either. But the greatest school of all is the school of self-effort, in which most of those who excel receive their training, and in which one may receive an education that will fit him for any position whatever.

Now if you make up your mind to try for a certificate, and wish to know in what branches you will be examined, and the nature of the questions that will be put to you, all you have to do is to address a note to the city or county superintendent, asking him to be so kind as to send you a copy of the last set of examination questions, which are all printed on one sheet, and which he will readily send you. Then you must get the necessary books, and prime yourself for this examination. The best of us must do that; for a great deal is asked that is seldom or never used. If you once pass the examination for the lowest grade, which is not difficult, you will find the next easier; for you gradually get into the way of solving questions and problems as well as of asking and forming them. The Germans say that he who learns A is sure to learn B; and so he who takes the first step is sure to take the second, and with pluck and perseverance, the third also. The teacher who has a first-grade certificate is generally regarded as a superior person, and is likely to receive a superior salary.

As to a position in a private school, that is another matter. Here any certificate may be useful, though none is absolutely necessary. You are judged here more by your general appearance and apparent fitness to teach than by anything else. A position in a private school is often superior to one in a public school; for in private schools the salaries are generally higher and the classes smaller; fine qualities of conduct, manner, speech, and carriage are more highly esteemed; and there are no ever-recurring examinations to be gone through. Sometimes the principal of a private school puts the applicant through a course of trial lessons before a class in his presence, and decides as to his fitness by the manner in which he conducts himself in these. I once heard of a principal who, laying down his silk hat as he entered the class room, said to the

candidate for a position in his school, "Could you teach geography from that hat?" Of course, one who knows how to teach could do this; for he would instantly perceive that attention could be drawn to the material of which the hat is composed, to the manner in which silk is produced, to the worms that produce it, the trees on whose leaves they live, the country in which these trees grow, etc.; and thus would originate a fine lesson on Italy and the Italians. But the candidate in this instance was a novice, who had no idea of such a thing; he thought he must have at least a geography, or a globe; and so he failed to secure the position he sought.

When you have passed your examination and secured a certificate you should address a note of application to each board of education within hailing distance of your residence. In this note you should state where you were educated (if in the school of self-effort, all the better), the date of your certificate, the amount of your experience, if you have any, and any other important fact illustrating your capacity and fitness to teach. This note of application is filed; the name of the applicant is registered; and, when a vacancy occurs, the applicant stands a fair chance of being appointed. That is how things are done with us. Of course personal application and solicitation go a great way; but an honest board will give the preference to the most capable candidate.

I should not, however, confine myself to public schools; I should apply to private schools as well, for the reasons I have already stated. One of my teachers, who had only $375 a year, applied for an increase of salary: being refused, she made application to a private school in New York (where she was tested in the manner above described), and immediately received an appointment with $600 a year. When I returned from Germany, I procured the names and addresses of the chief private schools in New York City; and, setting out at eight o'clock in the morning, I visited the principal or proprietor of a dozen schools, and secured two situations in three days: one in a day school and the other in a night school. As to the salaries in the public school, they vary according to the locality; the cities pay more than

the towns, the towns more than the villages. They range all the way from $200 to $2,000 a year, for women.

Now as to who should become teachers—I mean who, among all those looking for a profession, or who, among all those engaged in other and less satisfactory pursuits, should endeavor to enter this profession—I think that every young woman who has a love for study, for intellectual pursuits, who is fond of reading and enlarging her stock of knowledge, should become a teacher; for the very fact that she is animated by a passion for study and a thirst for knowledge indicates that the Creator meant she should live by spreading knowledge among others, and letting her light shine so as to "give light unto all that are in the house." I do not insist upon her having a fondness for children; if she have no aversion to them, that is sufficient. The love of knowledge, of intellectual progress, will bring the rest in due time. We are so constituted that we find our greatest happiness in doing what we like to do, in work in which we feel that we are ourselves going upward and onward, and carrying others along with us; and I think that no work is so congenial, so satisfying to a studious mind, as the teaching and training of young people, the forming of the minds and hearts of the rising generation. These young people will retain forever the remembrance of their teachers, and extend their influence to all coming generations.

The teacher has far more influence than the preacher; for the teacher has his audience before him five days in the week, and all day long; while the preacher has his audience before him but one day in the week, and only for an hour or so altogether; and while the minds of the teacher's hearers are as wax to receive impressions, those of the preacher are as steel, being already formed and fixed, and by no means easily impressed. Hume says that he who attains mediocrity in literature stands far above him who attains eminence in trade; and I think that he or she who attains eminence as a teacher is in no way inferior to a first-class preacher, or physician, or lawyer, or editor.

Teaching means quite a different thing now from what it

used to mean. It now means all that is lovely instead of all that is hateful; it now means inspiring children with a love of knowledge, and seeing them eagerly pursuing it of their own accord, instead of forcing and flogging it into them; it now means a loving and cordial understanding between pupil and pedagogue, instead of a distant and overbearing attitude on the part of the one and a shrinking, dreading, deceiving attitude on the part of the other; it now means awakening the minds of youth to all that is interesting and beautiful in the world, instead of cramming them with all that is hateful and repulsive; it now means running like deer to a place of happiness, instead of "creeping like snail unwillingly to school." As it is now seen, teaching is not merely an art, but a science; not merely an occupation, but a profession. There is now, for the first time in the world's history, a chair of pedagogy in several of our universities, which is founded on the principle that teaching is as much a science as theology, medicine, or jurisprudence, and which grants degrees to those who attain a certain proficiency in this science. How different things are now from those "good old times" when men thought that one who had failed at every other calling might become a schoolmaster!

Yet it must not be supposed that every one who has acquired a certain amount of knowledge may become a teacher. A teacher he may become, but not one who educates. Precisely as it is not always those who pass through the regular curriculum who make the best doctors, lawyers, or preachers, so it is not always those who have had the longest schooling or acquired the most knowledge that make the best teachers. Successful teaching is largely a matter of gift and inclination, of loving and liking for the work, of openness of mind, and of eagerness for advancement in knowledge and skill. One with a gift and little knowledge is infinitely preferable to one with no gift and much knowledge; for the want of knowledge may be remedied, but never the want of a gift. I have known teachers who were poor at examinations, but excellent at teaching. Yet I believe that any person with a good natural capacity, with a willing and kindly

disposition, and a love of study, may become a good teacher. It is only those who hate the profession, who do not care for intellectual progress, that make bad teachers. Seneca, in the following words, displays the very soul and spirit of a true teacher: "If I delight to learn, it is that I may teach; nor will aught, however salutary, however excellent, bring me pleasure, if I am to learn it for myself alone. Were wisdom to be offered me on the sole condition that I should keep it locked up and not proclaim it, I would shun wisdom. Without another to share, there is no joy in possessing."

Now let us consider for a moment the advantages and disadvantages of the teacher's profession. In the first place, it is a fine thing for a lady to have such working hours as those of school children, and such holidays, too; it is a fine thing for a lady to be able to get to work at nine o'clock in the morning and to get home after three in the afternoon; it is a fine thing to have every Saturday and Sunday free, a holiday or two almost every month, and a vacation of two or three months every year besides. The great thing that I saw in this profession, when I first adopted it, was the increased amount of time it afforded me for study. That, I thought, made me equal to a man of independent fortune. I had envied all those who had been able to devote their entire youth to study; but now I thought I could make up for it. Garfield used to say that all thinking workmen make every stroke of the hammer, every blow of the axe, a step toward leisure to study. No occupation or calling allows the workman to make so many such strokes as that of the teacher.

In the next place, teaching children seems a peculiarly fitting employment for women, something suited to their nature and capacity. Far from being degrading, as many occupations of women are, this is and ought to be in the highest degree ennobling and elevating. The teacher who loves her work and knows how to make it interesting need never fear any difficulty with her scholars; they will be only too ready to meet her with attention and repay her with

love and gratitude. It is the old, stupid practice of cramming them with things they don't comprehend that makes them and the work hateful. I used to think, as the Germans still think, that women have not the capacity of men in teaching. I think now that they have, in some respects, a finer capacity than men: they are more patient, persevering, kind, and even-tempered; they have a gentler and more winning way, and consequently a more civilizing, humanizing influence on their scholars. While men compel attention and obedience, women win it by persuasion and gentleness. Indeed women possess a tact and skill in discipline which few men can equal. The truth is, however, that the influence of both male and female teachers is necessary to make perfect men and women; this is as nature has ordained; for children at school, like those at home, need the influence of both father and mother to mold their hearts and minds aright. And this is why it is well to put boys and girls together in the same class: they exert a beneficial influence on each other. "We cannot improve on the plan of the Almighty," said a New England teacher, "who decreed that boys and girls should be brought up in the same family." There is no influence better than that of sister on brother, brother on sister, and father and mother on both.

Among the disadvantages may be reckoned, the severe strain on the system which conscientious class teaching entails; the ill effects of close confinement in crowded schoolrooms; the vexations consequent upon the unruly conduct of ill-mannered or ill-bred children; the worry caused by ever-recurring county examinations; and the anxiety caused by the necessity of bringing the class up to the required standard. Well, these are disadvantages; but what position in life is without its disadvantages? And what pleasure would there be in life if there were no difficulties or disadvantages to be overcome? If the principal of the school be a gentleman, and the board of trustees honest men, then much of the worry and anxiety are eliminated.

There is another disadvantage—perhaps an imaginary one—which I would like to mention. I do not know what

the figures are, what proportion of ladies engaged in teaching get married as compared with those engaged in other pursuits; but it is said that fewer teachers than other women-workers enter the state of matrimony. I doubt the fact; but if it is so, it is probably owing, first, to the circumstance that most of our lady teachers earn as much to-day as the young men of their rank do, some of them much more; and they do not care to exchange a comfortable single existence for an uncomfortable double one. Secondly, to the fact that many of our young men are getting more and more like those of Europe in one respect: they look for a wife with a dowry, and prefer a vulgar woman with money to a cultured woman without. The ordinary young man, clerk, salesman, or mechanic lives on a lower plane than the teacher, and prefers a girl he can fool with or make a fool of to a woman of character. As he is not up to her, he does not feel at ease in her presence, and would rather mate with the vulgar daughter of a shoddy contractor than with the most accomplished teacher. A gentleman feels that it is for him to earn the bread, and for his wife to take care of his home and children; but the fortune hunter wants a wife who can do both. He is always a sensual, selfish brute; and it does not take long for his victim to find this out. One thing I know, which is, that a good education, with practical experience in the training and managing of children, far from unfitting, renders a woman all the more fit for being a good wife and mother; and he who gains the love of such a woman, even if she have not a penny, acquires a fortune more precious than that of the Astors.

OPPORTUNITIES FOR WOMEN

Authorship

By MARGARET E. SANGSTER

THE outlook for woman in literature is not very different from her outlook in any other field or profession. The woman who would succeed in authorship or editorship must remember that literature, like art, is a jealous mistress, and permits of few rivals. She must be willing to consecrate her time, thought, and strength to the work she has in hand. Qualities of accuracy, promptness, method, and fidelity are as important here as elsewhere. She needs, too, a certain business knack, so that she may adapt her wares to her purchasers.

If journalism be the aim of the ambitious young girl just leaving college, it is quite probable that she may have to begin on the lowest round of the ladder and work her way up, and while there is room at the top, the lower rounds are apt to be very crowded. Therefore the young woman who means to succeed will disdain no small assignment, and will undertake willingly any obscure task which may be given to her. While the broad culture and mental discipline which are her dower from her college will enable her to do the best work wherever she may be placed, she will soon discover that what we used to call "the ordinary English branches" will stand her in good stead in the daily task.

The successful woman author or journalist must know how to spell, and must be so impressed with her duty to her mother tongue that she will use it with correctness and ele-

gance. An intimate acquaintance with the masters of literature will greatly assist her, partly in an enriched vocabulary, partly in facility in writing, partly in grace of style; but when all else is said, writers are born and not made. One finds the writing talent cropping up unexpectedly in some bright girl who has had comparatively limited advantages, while it is entirely absent from one to whom the schools have lavishly given all they had to bestow; and therefore, to begin with, one who aspires to success must have, at least to a certain extent, this blessed writing talent which the fairies have dropped into her cradle at her birth.

These are days when everybody reads and almost everybody else tries to furnish the reading. The special temptation of the novice is to attempt that which is lofty and far afield. A woman who knows all about dishcloths and dusters sends verses to the magazines, and is dismayed at finding them declined. The possibility is, had she written about homely housekeeping and sent her work to a homely housekeeping paper, it would have been received and paid for.

Common sense is a requisite of success in all departments of life. It is very evident that one must have a certain amount of this if she would make her mark anywhere. In accordance with this plain, everyday essential, the literary aspirant will make herself depended upon. If she undertakes to do a thing, she will do it. If she promises to be at a given place at a given hour, she will keep her appointment. She will not neglect her health, for on its maintenance hangs her ability to keep her word when she has made an engagement.

Perhaps the greatest danger in her case will be that she will attempt too much. A woman simply cannot succeed in literature or journalism and at the same time go freely into society or devote all her evenings to amusement. She will need her full modicum of sleep. She should have good food, and plenty of it. She will find it wise to dress with a view to going about comfortably and at her ease in all weathers. Not losing a particle of her womanliness, she will not stand upon it to the exaction of drawing-room

courtesies from busy men in business hours. In short, her common sense will pervade everything that she does.

The woman who would succeed must also study carefully the public whom she addresses. It is not worth while to send a thoughtful and philosophical essay to a society paper, nor a child's jingle to a stately review. Women sometimes make the mistake of trying to write on a subject of which they know nothing. Thus, to a woman who has made science of music her study during many painstaking years there came one day a flighty telegram from a young woman to this effect: "Please wire me all you know about Norse music. I have to write an article on it for such a paper by such a date." Manifestly this was not the way to undertake such an exploit, and there was a singular dullness of vision and lack of conscience in the woman who could make such a request from such a source.

The woman who would successfully fill her place in the literary field must rise above mere mercenary considerations. The need of money and the desire to earn it are perfectly legitimate incentives, but no one who does the best work ever does it for money merely. It is everlastingly true that "man shall not live by bread alone."

How to Write Well

By MARTHA McCULLOCH WILLIAMS

THREE things are essential to success in pencraft—to have something to say; to know how to say it; most important of all, to know how and where to market it after it is said. Nature, education, and environment have much to do with the ability to succeed in the first two. The vital third rests almost wholly with the intending penwoman. The best, the only way, to find out where and how to sell manuscripts is to read current periodical literature, not at haphazard, with languid lack of criticism, but alertly, comprehendingly, looking all the while as to the why and wherefore of everything that goes in.

Every publication worth considering has its own definite aim and atmosphere. Aims and atmosphere, of course, have points of contact. What you need to look out for is not their likenesses, but their differences. Once upon a time I submitted a story to a veteran publisher who has found millions in the business. In returning it he said:—

"I like your story immensely; I should print it but for a single line in it. You speak of the heroine as 'of the county aristocracy.' My public would not bear that—would not bear, in fact, any recognition of the fact that there are such things as social class distinctions. If I printed your story it would call down on me an avalanche of angry letters, and maybe cost me some lifelong subscribers."

The incident is trivial, but worth telling, as showing how

many things go toward determining acceptance or rejection. Take any assignment that you can fill acceptably, regardless of topic, but take none that might be given you simply because there would be a sensational fillip in seeing how a woman would discharge it.

The best English, and plenty of it, is hardly good enough for real newspaper work. Try always to say what you have to say freshly, picturesquely, in the fewest possible words, with the strictest possible regard for accuracy. Never "fake" anything. If you cannot find a story, have the courage to say so. If you find a nasty story, have the supreme courage to leave it untold. Let it be understood that you are dependable, accurate, and given to noting the small things which give verisimilitude. If Fate is unkind and sends you interviewing, pray for double stocks of tact and discretion. It is often unsafe to put into people's mouths the things they say, and extremely safe to put there the things they would like to have said, only they did not know them to say.

OPPORTUNITIES FOR WOMEN

Journalism

By CYNTHIA WESTOVER ALDEN

JOURNALISM proper, as a field for the activities of women, offers many rewards objective and subjective. At the beginning, let me explain what I mean by journalism proper. It is not the mere writing of pieces for the weekly, monthly, or daily newspaper, or the mere drawing of a salary in a position held by strictly extrinsic pull or influence. It is the conscientious, continuous earning of a living, as reporter or editor, in the collection or handling of daily news. The objective rewards, summarized, mean an honest, reasonably liberal maintenance. The subjective rewards, summarized, mean a perpetual broadening of the intellectual and spiritual horizon of the worker. Before the seventies woman was hardly known in daily journalism. Mrs. Sarah J. Lippincott (Grace Greenwood) had contributed political and sociological essays to several newspapers; so had Mrs. J. C. Croly (Jennie June). James G. Blaine's sister-in-law, Miss Abigail Dodge (Gail Hamilton), was also a valued though desultory contributor. Earlier than this, Victoria C. Woodhull had offered to the "Herald" her series of articles on "The Tendencies of Government," and these were printed in the spring and summer of 1870, but were hardly treated seriously by the elder Mr. Bennett.

One of the first women to make a name for herself as a regular salaried employee of a New York newspaper, in a newsgetting capacity, was Miss Midy Morgan, the live stock reporter of "The Times." She came from a good

Irish family, was thoroughly educated, had traveled all over the world, and was one of the best judges of horseflesh in the United States. To some of her closest friends she used to show a gold medal presented to her by Victor Emanuel, King of Italy, who had commissioned her to buy a hundred horses for the royal stables, and had thought her good judgment and economy worthy of special recognition. Miss Morgan's work for "The Times" suited her, but would not have been congenial to most women, as it involved a daily visit to the great stockyards in the neighborhood of the metropolis. No man could have been more conscientious about doing this work well, and equally well, in all sorts of weather. She was also a contributor to "The Tribune."

Miss Nellie Hutchinson was for many years in charge of a "Personal and Humorous" column on the editorial page of "The Tribune," which was perhaps more widely quoted than any column of its sort in the United States. She was also one of the most trusted literary and dramatic critics in America. Miss Hutchinson (now Mrs. Cortissoz) is yet a member of "The Tribune" editorial force.

In later years, largely because of the success of a few womanly and able attachés of large newspapers, women have entered the journalistic field in increasing numbers. Their presence there has lost its novelty, and no longer calls for comment.

Salaries differ with different localities, the character of the newspaper concerned, and the personality of the individual worker, because personality is everything in the getting of news and the writing of criticisms. Salaries range from $15 a week to $80. There may be one or two women in legitimate journalism who are making more than the latter figure. Until experience has done its perfect work no young woman can expect to earn more than the average salary of a reporter, say $15 or $25 a week. This is, in New York City, only a little less than men are receiving for the same work. In some Western cities, I understand, the rates are slightly higher. I know of one woman in Denver, Colorado, who receives $30 a week for reporting.

Literary and art criticism, so essential to any great modern newspaper, is open to women equally with men. The beginner may always hope to succeed if she can develop sufficient culture, acuteness, and skill in writing.

As for advancement in her calling, therefore, the reporter need not feel that she is hopeless; but if she will take my advice, she will temper her ambition with a consciousness that a newspaper demands no work that is higher or more dignified than the collection of news. It is certain that all the human sympathy, all the dramatic sense, and all the logic of the brightest graduate of Wellesley, Smith, or Vassar will be required to grasp the essence of a news story, perceive the facts properly, and express the whole in English as pure and understandable as that of the King James version of the New Testament.

Let me warn the aspirant against philosophy and fine writing. No matter how clever a woman may be, there is little chance that she will be able to rival Locke, or Bacon, or La Rochefoucauld, or Montaigne, or Benjamin Franklin, at first. If she tries to deal with generalities and write glittering introductions, her copy will be cut to pieces unmercifully, because her remarks are likely to be either all wrong or all stale. The living, breathing world is intolerant of upstarts and imitators. The living, breathing story of what has happened is demanded from her pen. That is the news. That is the new thing. As for style, the shortest words, the shortest sentences, the clearest forms of expression are the best. Addison is obsolete, and Kipling is the best model, if a model the woman journalist must have. Frankly speaking, I would prefer to try a girl who has no model; she is far more likely to render her writing intelligible within a brief period of training.

The country girl should not come to New York with the intention of making a living in journalism, without enough money to make her safe from privation for six months. As for other qualifications, I shall try to enumerate them as briefly as possible:—

First: A good common school education. If the aspir-

ant has broader culture than such an education implies, so much the better. She cannot possibly know too much. But English grammar and spelling are indispensable acquirements if tolerable manuscript is to be produced.

Second: A legible hand. If a woman can use a typewriting machine, there will be many occasions when she can make her manuscript better by so doing; but often the use of such a machine will be absolutely impracticable.

Third: The manners of a woman of good society. I do not refer to society with a big "S." That is another thing. The manners of the best people in Oshkosh, or Spring Valley, or Cripple Creek are good enough. But coarseness is unpardonable in a woman who is going out every day to talk with womanly women in the necessary collection of news.

Equipped with these qualifications, freed from nervousness by the fact that she is temporarily provided for, the young woman will find it worth her while to study newspapers before she goes into a newspaper office. She should learn what sorts of matter are printed every morning and ask herself whether, in the same fields, there is not some unprinted story that she knows or can find out about. If there is, let her write it up. With this article she may go to any office and ask for the city editor or the editor of the woman's department. She will equally avoid coquettishness and constraint. She will say: "I am Miss Brown, of Stamford. I have come to New York to learn to be a reporter. I want a chance to learn. Please look over this story and see if it is worth using, and give me an assignment to try me. I am ready to do any work you can put me to."

The editor will say "Yes" or "No." If he says "No," she must try another office in the same way. She must not feel personally hurt or aggrieved if work is not immediately forthcoming. It is not Miss Brown, of Stamford, who has been rejected. It is an inexperienced applicant for work. If she persists in her study of newspapers and her attempts at news stories, she will succeed sooner or later in getting a trial. What then?

She must put her work ahead of all social engagements. She must be always on hand. The bird which is watching when the worm crawls out into the sunlight is the bird that gets fed. If getting a story makes work after midnight necessary, she must work after midnight without murmuring. She must dispense with the idea that it is dignified to do one thing and undignified to do another. All are parts of the same whole. She must not give to her meals precedence over her work; yet she must eat with reasonable regularity, if she would preserve her health, and without health good work is impossible. She must dress for all weathers. She must always remember that it is her paper and not herself that is snubbed when any one refuses her news. She must feel herself just one finger of a giant—the press of America. She must get rid of the theory that a woman may not safely go into the streets of a city without an escort after dark. If she behaves herself she is in no more danger than is her brother. She must put truth above everything else, and avoid the fallacy that imagination can be made to take the place of industry.

If any young woman of ordinary sense will pay attention to all these points she can make a good living as a reporter. She will find that the range of her understanding and her sympathies is being increased with every month of her work. She will be studying, not Hawthorne, or Hardy, or Howells, but the raw material of the novelist. Her daily experience will be a continuous education for the field of legitimate fiction. Humor and pathos will be entering into her daily life in a way that would be otherwise impossible. If she has talent or genius or executive ability her future is secure. Meanwhile her daily bread is provided for. What more could be asked for any vocation in life?

OPPORTUNITIES FOR WOMEN

Librarians

By ADELAIDE R. HASSE

MUCH confusion exists in the minds of women ambitious to take up library work as to the purpose and organization of libraries. This is probably due to the prevalent idea that it is the love of books that is the making of the successful librarian. As a matter of fact, the modern librarian is actuated as little by a love of books as is the produce broker by a love of grain.

Every library is governed by a body of trustees or directors representing the institution, society, city, or other supporting power of the library. This body appoints an executive, called either a librarian, a superintendent, or a director. It is this individual who, in the public mind, controls the affairs of the library. This head librarian is assisted in the discharge of his duties by one or more assistant librarians and a more or less numerous staff. In a large library this staff includes a business manager, a bookkeeper, stenographers, pages, electricians, engineers, printers, binders, janitors, cataloguers, and attendants. In a small library the staff dwindles to librarian, cataloguer, and attendants, while in the smallest library all the functions of the above-cited employees are vested in the librarian.

As in teaching and acting, the two professions which claim with library work the largest proportion of salaried women, the preparation is more or less perfunctory compared to that demanded by the learned professions. This is

natural when it is considered that in either of the former occupations success for a woman depends more largely upon temperament than upon a knowledge of any one of the exact sciences.

The problem which confronts the average parents of collegeable girls is the vital one of expense, i.e., can they afford to have the girl give up four years' time, at the end of which she will have no especial equipment, or is it a better policy to specialize without the general preparation to be obtained at college?

A general answer to this question naturally must be conditional. In library work the college-bred girl, as a rule, produces better results than her non-collegiate competitor. The college-bred girl has had more thorough mental discipline, a more definite purpose, and probably wider personal experience—all of which conduce to a desirable poise in the professional woman. Moreover, she will have a reading knowledge of at least two foreign languages; a practical experience in the use of reference books; an acquaintance with general literature and history, all important accomplishments of the library worker. Even while attending college a girl may make some preparation toward an acquaintance with library methods by doing volunteer work in the college library.

The young girl, fresh from high school, who cannot afford four years at college, and who has decided upon library work as her future occupation, can follow one of two courses: she can do volunteer work in the local library or enter one of the library schools. These latter are the library school connected with the New York State University, Melvil Dewey, director; the library school at Pratt Institute, Brooklyn, Miss M. W. Plummer, director, and the school connected with the Illinois State University at Champaign, Miss K. Sharpe, director. The Albany School and the library department of Amherst College also conduct summer schools. Any information as to cost, requirements, etc., may be had on application to the addresses given. If she does volunteer work in the local library the girl is called an apprentice,

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and her term of apprenticeship may vary from three to twelve months. She receives no salary, and her instruction is desultory and rudimentary. Her apprenticeship will have identified her more or less with that particular library, and her work having proved satisfactory she may receive a promise of a place when a vacancy occurs, or she will have to take her chances with others in another library. This apprenticeship system is in operation in most of the large libraries. Some require a preliminary examination, in others the applicant may qualify after a personal interview with the librarian.

If she enters a library school she must pass a more or less rigid entrance examination and apply herself to a course of training covering from one to two years. During this time she is instructed, largely theoretically, in the various clerical occupations, and in the use of the mechanical and other devices of the modern library. At the end of that course she is launched as a thoroughly qualified library worker, her instructors exert themselves to secure a place for her, and the future seems to smile.

In the profession she is about to enter the library worker will find various branches of work, viz., clerical, executive, and special. The former is to a large extent the only one covered by the training schools. It comprises keepers of the library records, copyists, and cataloguers. The executive branch includes the librarian and assistants, and is occupied largely by people of long experience or of exceptional personal ability. Special work is limited in scope, and is found only in the large libraries. It is confined to persons of special attainments, linguists, experts in rare books and manuscripts, etc.

The salary of a graduate volunteer worker or apprentice will probably begin at $30 and rise in easy stages until it reaches $40, when there will probably be a long pause before the next gradual ascent to $50 per month, the maximum limit for some years. How long a girl receives a salary which barely suffices to pay for the necessaries of life, especially in a large city, depends in a small degree upon fortuitous circumstances, but almost wholly upon the girl

herself. Her appointment and advancement in this, as in any well-conducted business, rests upon the fact that she will have satisfied her employers, and that she will perform the duties assigned to her more sincerely and more intelligently than any other available person.

A training school graduate, on the other hand, begins as a rule at $50, while $75 may be considered the average salary for experienced work. This means that the employee receiving it has charge, probably, of some special line of work, and is officially regarded as head of a department. The salary of a woman head librarian varies with the size of the library which she controls. A couple of years ago there was a woman in the profession who drew a salary of $2,500, but she married, and the place is now filled by a man.

The average laboring day for the library worker is from nine to five, and, in addition, night duty from six to nine on alternate nights each week. Libraries that are open on Sundays usually have a special staff for Sunday duty. There are few holidays, for the custom of keeping libraries open every day in the year is being more and more generally adopted. Vacations vary from two to four weeks. The opening for an enterprising girl is fair. Such a girl will discover that library work is not confined to work in a library. She will learn that the facilities she has acquired in the use of indexes, encyclopedias, dictionaries, and her knowledge of languages can be marketed in the office of the newspaper, the lawyer, doctor, or minister; in publishing houses, to compilers, and to journalists. Intelligent preparation of bibliographic material can be put to a variety of uses not strictly within the limits of library work.

The girl who finds employment in a library realizes that the *fin de siècle* note of specialization has an air of romance. To-day it has developed the reference librarian, the school, the map, manuscript, newspaper, and club, Oriental history, Hebraic, science, and blind librarian, besides numerous other variants of the dear departed custodian of the library of old.

These and other positions in the profession more especially adapted to women are not the result of training received in

any library school. They can be filled successfully only by a woman having the innate qualifications for the work, gifts beyond the power of schools to impart. Lacking these qualifications she becomes a mere automaton, a clerk.

The training of a library school fits the pupil only for secondary or non-executive places in average libraries, the salaries of which vary from $30 to $75, advance depending upon individual effort. To sum up, a college education is desirable for the library worker; a knowledge of languages and history is essential; specialization is advisable. The prospects are that women will continue to outnumber men in the library profession, because they enjoy the environment, which is one of the greatest compensations in library work. This weakness, if weakness it may be called, enables women to consider lower salaries than men would accept, and, having less regard for money value than men, they contentedly peg away, year after year, on a stipend which is gradually crowding men out of the lower ranks of the profession.

OPPORTUNITIES FOR WOMEN

Private Secretaries

"WHEN you ask me about the duties and qualifications necessary for a private secretary," said a woman who has filled such a place for fifteen years, "I suppose you mean the secretary of a business man.'

"In these days the secretary must be a stenographer and typewriter, though she writes many letters that do not come under the head of business correspondence. She must be well educated in ordinary English branches, and should have some knowledge of French and German, at least. Added to this, two qualities that are desirable for any woman in a clerical position, or in any position, are absolutely indispensable for the secretary. They are discretion and a talent for classification; or, in other words, a methodical mind.

"If she is not discreet, she may unwittingly reveal what she should have concealed, and thus do as much wrong in effect as if she had deliberately betrayed a trust. 'She is so diplomatic,' complained an old friend on the return of a young woman who had gone abroad as amanuensis to a high official. 'She won't tell anything.' But it is better to appear unduly reticent than to be indiscreetly communicative.

"The secretary of a well-known literary man when asked about her employer's plans laughingly quoted, 'If one knows it, it's 1; if two know it, it's 2; but if three know it, it's 3.' As there are persons who descend to the kitchen or the laundry in search of information, who are not above questioning the neighbor's cook, washerwoman, or other domestic re-

garding family affairs, so there are persons who do not hesitate to seek knowledge of a man's private or business concerns through one who is in his confidence, and discretion is the more necessary because direct questioning is not the usual method. A few days after I took my place my employer said: 'I want you to open my business letters every morning, and place them ready for me on my desk. My private letters you will leave unopened.' 'How shall I be sure which are private letters?' I inquired. 'Err on the safe side,' was his only reply; and I have found the advice useful in many perplexing situations.

"In addition to the correspondence, my principal duty is the care of all documents, the filing and indexing of letters, reports, bills, receipts, notes, etc., and keeping an account of expenditures. When I transfer the contents of a letter file in its binding case I make a typewritten alphabetical index of names, dates, and subjects, and place it at the top of the file. I make similar indexes for all documents that I keep in files. When anything is required at a moment's notice, a glance at the index shows where it is, and no time is lost in searching through several files. I index the letter copying books in the same way, and, of course, label all pigeonholes carefully. I also keep an address book and a diary. In the diary there is a record of all visitors to the office, and an account of important interviews, etc. Not long ago a man who was required to state in court the date of his last visit to New York came to me for assistance, as his memory had failed on that point. By turning to the diary I was able to give him the date of his call at our office."

The Piano and Organ

By KATE S. CHITTENDEN

THE qualities essential for a good musician are a sensitive temperament, an acute ear, and a logical mind. The successful musician must possess indomitable perseverance, indifference to adverse criticism, and be able to maintain steadfastly the pursuit of a distinct aim. While a musical ear can be cultivated to a certain extent, and taste can be stimulated, yet one must have been born with a natural aptitude for the art to become a good musician.

I have been interested in hearing of an experiment tried upon a little child, who, apparently born with no talent, is being hypnotized once a week, with the idea of developing a taste for music; and, according to her teacher, this hypnotic influence is having the desired effect. But, in my opinion, it is a most dangerous thing to hypnotize a child for such a purpose, because it may leave her a prey to hypnotic influences all her life.

In regard to the age when one should begin the study of instrumental music I may quote the great violinist, Joachim, who is reported to have said that to become a virtuoso it is necessary for the child to begin work at five years of age in order to train the nerves and muscles to control the instrument. Yet early training alone will not insure virtuosity.

It is interesting to read in the letters of Mrs. Browning how her little son Penini, the now celebrated painter, Robert Barrett Browning, was taught the piano by his father, who

sat beside him two hours daily, and that when he was ten years old he was able to play Beethoven's Sonata, opus 7, in E flat. Yet he remained a musical amateur. On the other hand, no one knows to how great an extent the training of his hands at the piano may have contributed to his skill as an artist.

One thing is certain, however, the only means by which complete control of both hands can be gained is the piano. The organ and harp each requires the use of both hands, and all ten fingers; but the piano alone is able to register those infinitesimal shades of expression in sound which indicate the psychological condition of the player. There is no such thing as touch in organ playing, because it is impossible to alter the tone quality in an organ, whereas on a piano the trained performer registers every passing mood through his finger-tips.

Certainly no one who expects to excel as a performer ought to begin later than ten years old. As to the length of time requisite to produce a good player, I do not advocate more than three hours' practice daily. Provided there are force and lucidity of mind in the teacher, and a concentration of purpose on the part of the pupil, that amount of practice can safely be set as a limit, although many students work from five to seven hours a day.

A great deal depends upon the teacher, for a first-class master in the end may cost less than one whose fees are smaller. The experienced teacher often makes crosscuts to results that are never dreamed of in the philosophy of the smaller members of the profession. The best players do not always make the best teachers, especially with young pupils, but for advanced students there is nothing to take the place of the inspiration that comes from an artist, even though that artist may have retired from active service as a performer.

No one can become a finished musician in any less time than is required to become a fully equipped physician, lawyer, literary man, or artist. Each year the examining boards of all the great professional schools raise the standard

of work that is required for a diploma, and it is the constant raising of the standard that is eliminating the poor material from the ranks of American professional men. It is the same with music and musicians; what was considered a fine musical education twenty years ago would be second-rate to-day. In fact not only concert players, but teachers, are compelled to grow in artistic stature from season to season, or be content to be left behind in the march of progress.

As far as methods of study and practice are concerned, I am committed to the teaching of the synthetic method of piano playing. The cost of a pianoforte education is governed by the length of one's purse. It is a good plan for a student of limited means to place herself in the hands of an eminent teacher, who will appoint an instructor whose work can be supervised. The cost of such a course need not exceed $100 a season, because there are so many talented young teachers who are only too glad to avail themselves of the opportunity of working under the advice of their own teachers.

Another plan is for the student to join some of the classes held by such men as Rafael Joseffy, Dr. Mason, and Albert Ross Parsons, each of whom is engaged, more or less, in critical class work.

In some instances students have been known to attend the courses of all three during the same season, and the results from hearing the same composition treated by each master have been most inspiring. This form of work has grown in popularity during the last few years, and fills a special place. Many of the prominent teachers give scholarships to talented pupils for the sake of the artistic results that can be achieved with such pupils, and frequently the names of the most successful performers upon school and college programmes are those of pupils whose education is given them gratuitously.

With regard to teaching, I believe that women are preeminently fitted for elementary work, because, as a rule, they understand and can manage children better than men can, and are much more patient. Where a woman stands in the

front rank of artists there is no reason why she should not do exactly as good work with advanced pupils as a man does. Out of the scores of teachers to whom it has been my privilege to explain the synthetic method, the best all-round work that has been displayed came from the pupils of a woman teacher.

I am sometimes asked why so few women hold organ positions. The last issue of "The Church Choir Directory" gives the number of organists in New York and Brooklyn as three hundred and ninety-eight, out of which eighty-eight are women. Probably nine out of every ten organists of either sex are amateurs, who have undertaken to play in church on the strength of possessing a more or less limited knowledge of the piano.

Of the women who hold or have held prominent positions there are Mrs. Charlotte Wells Sanger, Miss Harriett B. Judd, Miss Josephine Losee, Miss Kate Stella Burr, and formerly there were Mrs. Christopher and Miss Augusta Lowell, all of whom have been able to hold their high places because of their thorough work.

Comparatively few of the churches, outside of the Episcopal ones, with boy choirs, have trained musicians at the organ.

So far as I know, the salaries of piano teachers in boarding schools range from $300 to $1,200 a year. Where teachers residing in New York go out of town to schools the fees are larger in proportion, ranging from $10 to $15 a day. The smallest salary I have ever heard of was $150, offered by a fashionable New York school for a season of thirty-four weeks, with twenty-four hours of instruction to be given in each week, making an average of about nineteen cents an hour. It was impossible to secure any one to teach in a day school at that figure.

Good private lessons, from conscientious, painstaking young teachers, can be had in New York for as little as $1 an hour, occasionally for less, and fees range all the way from that price up to $12.

Keeping Boarders

By MARY E. J. KELLEY

KEEPING boarders is an occupation usually overlooked in the lists of desirable occupations for women. Perhaps the oversight is due in a measure to the prevalence of the woesome type of boarding mistress, who is forever impressing upon the wayfarers within her gates the sadness of her lot at present, compared with those halcyon days before she fell to keeping boarders.

When evil times fall upon a household about the first thing the old-fashioned woman thought of doing to keep the wolf from the door was to take boarders, regardless of any qualifications or disqualifications for the occupation. But just as there is the new journalism and the old journalism, the new woman and the old woman, so there seems to be an old type of boarding house and a new. More and more people are taking to a sort of boarding house life, and the boarder is no longer looked upon as a bird of passage or a person to be pitied because he can't afford a home. It seems to be a sort of adaptation to the home life of the principle of big industries. People have discovered that it is not simply cooking and dusting and mending that make a home. There are women who take to housekeeping like ducks to water, and there are others who don't. The latter are likely to do other work so much better that they prefer to do it, and leave the housekeeping and cooking to those who can do it best.

The development of this coöperative idea has produced several new types of boarding house. The most interesting, perhaps, because the one which is likely to go on developing, is the big apartment house, where individuals have their own suites of rooms and their own furniture, cared for by the servants of the house, by themselves, or by maids who come in from outside each day, and where all dine in a common dining room. Another type is the family hotel, with its furnished suites and rooms, its common parlor, billiard parlors, smoking room, and other adjuncts; and there is the still newer type, the apartments, which have their separate dining rooms, in which meals are served from the common kitchen.

So it seems a great mistake for the new old woman, or rather, the young woman with the new education, and some old-fashioned notions of propriety, who is looking about for opportunities for obtaining a comfortable livelihood, to overlook the regenerated trade of keeping boarders—particularly as the successful managers of these new types of boarding houses are usually mere men. It's bad enough to find that the most prosperous milliners and dressmakers and cooks are men, but to have a man as a boarding house keeper seems going altogether too far for the spirit of the up-to-date business woman.

Perhaps the most discouraging feature of the boarding house business to the novice is the fact that considerable capital is required. You must have your house thoroughly equipped, to begin with. Prospective boarders are not going to risk your getting things after they've taken your apartments, and you must be able to wait. It may be months before you get your house filled, and months more before you get just the sort of folks you want. I wouldn't advise any woman, no matter how great her predilection for housekeeping, to set up in the boarding house business unless she has a houseful of furniture paid for, and money enough to pay her rent for four or five months at least.

Buying out an established place has its advantages and its disadvantages. The boarders may be friends of the

former proprietor, accustomed to her ways, and they may resent changes and leave.

In buying out a place it is not wise to pay cash down. It's a nuisance having to make monthly payments, but it's better than to discover that the apparent boarders are merely hangers-on, given room in order to make an impression on the prospective buyer. Claims on the furniture may crop up, too, unless proper precautions are taken. I don't know but that the best way, if you have from $400 to $1,000, is to take a house in the best locality you can get, fit it up, and advertise among your friends and acquaintances, at the bureaus which direct people to boarding places and in the newspapers. It is better to pay $5 or $10 more a month, and get a house with all the improvements at the start. If one has to buy furniture, good secondhand articles, which may be picked up cheaply at the auction shops if one is a discreet buyer and knows when to stop bidding, are much better than cheap new stuff, or buying on the installment plan. Credit accounts are things which will eat up the biggest profits possible to the boarding house keeper. You must pay cash, and buy at wholesale, whenever possible—no quarts of apples or dozens of oranges. You must go to the market and buy your vegetables by the barrel or bushel. Another thing to be remembered is that grocers and butchers always give a discount for cash to boarding houses.

If a woman is a good manager and knows how to buy good food at low rates, table board pays better than renting rooms. The profits on each table boarder are probably small, not more than a dollar or two a week. The money-making depends on having a large number.

The woman who is really determined to make a successful business of it mustn't be afraid to advertise. But she should not let the advertising take the form of a white slip on the door jamb, or a big yellow sign.

In choosing a house great attention must be paid to location. If men are to be largely counted on, convenience to elevated railroad stations and proximity to clubs must be considered. If family boarders are chiefly desired, a more fash-

ionable part of the city should be selected, and yet this, too, cannot be remote from lines of cars. The neighborhood must be good; a public school or orphan asylum or livery stable near at hand would ruin the most desirable house. While people wish to be in the midst of everything—convenient to every point of interest—they want a quiet street, and especially a quiet house.

No housekeeper can afford to allow any boarder to be excessively noisy or disagreeable in behavior.

Although it is perilous to start a boarding house on small capital and to buy furniture on credit, the thing has been done successfully. Some years ago three women, a mother and two daughters, came to New York from a country place with less than one hundred dollars. They proposed to start a boarding house. They found a house in one of the "Thirties," convenient to clubs and cars, and which the owner was willing to let them have on a venture, the rent to be paid at the end of the month. With $20 of their small capital they bought on the installment plan as much furniture as they could get, and fitted up part of the house. They were fortunate in letting one room almost immediately, then another and another. Meantime they took small sums of the money coming in—keeping enough for current expenses—and bought at auction pieces of furniture that would be too expensive for them to afford if bought new. In this way all the rooms were gradually furnished, and contained attractive things. One servant was kept at first, and that one a young girl able only to wait on the door and the table. But the neighborhood was so desirable and the table was so good that the house speedily filled up, and more help was needed. One of the young women would look at the papers every morning and answer the advertisements; another attended to the house, and the mother to the marketing and cooking.

Of course they had phenomenal luck, and it would be unsafe to follow their example and start with so little capital; but this shows what has been done. In three years these women had three houses furnished and free of debt, and were practically running a private hotel.

There is a family in this city now that pays $3,000 a year for a house. There are five persons to get a living out of it. The house brings in about $10,000 a year, which nets a small balance and keeps a nice home for the whole family.

As to the cost of furnishing a house outright, it can be done for about $150 a room for the large rooms and half that for the small ones. But this sum will not supply the dainty "fixings" that make a place look homelike and attractive. It is true that boarders almost invariably have their own "fixings," and prefer to put them out, discarding those they find in the rooms, but the rooms must have the look of being lived in, the "invitingness" that attracts, or no one wants them.

Of course the life of a boarding house keeper isn't always pleasant, but I can't see that it is half as unpleasant as having to spend six or eight hours in an office, and put up with the moods of an employer, as my friend did before a little legacy enabled her to set up housekeeping on a large scale. One needs, moreover, a great deal of tact and a certain amount of philosophy. A big bump of Irish humor is a great help. When you begin, set up a few rules for yourself. The first one should be: Don't expect gratitude; be satisfied with cash: if you can't, prefer it. Another: Don't make bosom friends and confidants of your boarders. Don't tell the boarders how you've come down in the world. Don't let any one be familiar, and don't listen to gossip. Be kindly, cheerful, tactful always.

No doubt boarding house keepers have failed much as Franklin did in his efforts to live up to a set of virtues. But I don't see any reason why women shouldn't make a business venture of boarding house keeping, and make a big success of it, too. It is just a trifle humiliating to me always when I hear so much about women's progress in medicine and law and the Lord knows what all, to observe that the most prosperous milliners and dressmakers and housekeepers are men. It's a fact; men manage all those big dividend-paying family hotels and apartment houses.

A Laundry Venture

THE New York "Sun" tells of two women of social prominence in London who decided to open a laundry. Lady Essex, one of the leaders of the smartest set in the English capital, is said to be at the head of the enterprise, and associated with her is Mrs. Williams, who is also conspicuous socially.

This is one branch of business which women both in this country and abroad have fought shy of. They have become milliners, florists, dressmakers, and restaurant keepers, but the idea of washing and ironing for a living has deterred even the most courageous of the sex from attempting to conduct what might be called a society laundry, to be patronized exclusively by the wealthy and offering first-class work at rates more than double those usually charged.

One New York woman, it is true, engaged in a scheme somewhat similar about fifteen years ago, beginning in a small way and by degrees enlarging her establishment until she is to-day the proprietor of one of the most successful establishments of the sort in the country. Women take up all sorts of money-making schemes with the idea of earning a living, from the culture of violets and the raising of pigs and chickens to more important endeavors, but the esthetic vocations appeal to them more strongly than practical enterprises, in which they could undoubtedly obtain more pecuniary success.

In laundry work the chances of accumulating a compe-

tency are far greater than in the overcrowded professions, in china painting or violet growing. Laundry work is a necessity, and good laundry work is scarce the world over. Even in Paris, famous for its laundries, there are loud complaints of late on account of the increase of machine laundries. Intelligence is about the only quality necessary to begin this work. The one successful woman proprietor of a large laundry in New York admits that she made her beginning with one servant and did not even understand how the work was done. She had a determination to succeed, however, and to-day she lives in a handsome residence of her own in one of the fashionable uptown blocks, is associated with various social charities and clubs, and her children are finishing their education in first-class schools.

"I prefer to keep my connection with my laundry work a secret at present," she said; "that is, from the general public. I am not in the least ashamed of the fact that I embarked in such a business, for, in the first place, I have made a success of it, and then I have never had any idea that manual work is degrading. Good work is something to be proud of rather than to conceal. But my children are at school and growing up among their young companions, who do not always share the ideas of older people. All my own friends know, however, of the small way in which my present business enterprise was begun. Indeed, they helped me to my first success, although they have always said that I gave them more than they agreed to pay for when I started out. Still, I doubt very much if I should ever have had pluck enough to start were it not for their encouragement and the promise of their patronage. For, of course, the idea of taking in washing for a living does not sound alluring, does it? Every woman has the same idea about this branch of domestic service. It is considered the most menial task, and only the very poorest and, unfortunately, the least worthy sort of women go out to do laundry work or take it in, as a general thing. The result is that it is never rated as among the possible vocations for women. In the first place, the girl who is growing up at home in the ordinary

family may be taught to sew and to sweep, to dust and to cook, but the washing is given out or else done by servants. This very fact makes the field an open one for women anxious to embark in an original enterprise. Every one knows how difficult it is to get good work in the usual public laundry. Acids are used, the drying is imperfectly done, and clothes come home worn out and discolored, while fine garments and laces are ruined very often.

"I know all this now, but I did not when I began. It all just happened, as the children say. I was left a widow with three little children to support, as well as myself. I had no business ability and no means except the very barest which would enable me to live until I obtained employment. I had the usual accomplishments and thought of music teaching and of school teaching and of sewing as a means of gaining a livelihood. But first I had to dispose of my household belongings which were too fine for my new circumstances. I had a good stock of fine table linen and bed linen, the old-fashioned kind that is not common to-day, and my own personal friends purchased this and went in raptures over the perfect way in which it was done up. The color was perfect, the folding neat and exact, and the gloss on the linen was the kind that adds so much to the appearance of good linen. I explained that this was the work of the colored servant who had lived with me from my marriage and who had lived with my mother before me. She was a strong middle-aged woman, a perfect cook and laundress. It occurred then to one of my purchasing friends that she would like this woman to take a place with her as laundress, for she had a very large weekly wash and had incompetent help in this particular. I promised to look up the woman in her Southern home, to which she had returned with all the regret of an old and faithful servant when I was obliged to part with her. In the meantime another friend of mine with a business turn of mind suggested that I take back the woman and advertise for high-class laundry work, for which I could charge a reasonable price and which I could have done in my own kitchen. I went about and talked up the idea and

gained the promises of my friends to send me all their fine washing. I felt the task a little bit, but not much, for I had the children to think of, and then every one was very kind to me. The woman, Martha, was only too glad to return to the city, and I made a bargain with her to pay her more as the work increased. In fact she really did share my profits during the first year. I had just sold out my home furnishings and now I was obliged to get another home much smaller, and with as cheap a rent as I could find.

"Martha and I together selected a small flat away uptown, with a good-sized kitchen and splendid facilities for drying on the old-fashioned pulley lines. It was considered very far up in Harlem in those days, but it is not now, and I often go back just to look at the old flat, the good drying space of which is now crowded full of other newer flat buildings. The woman was entirely in my confidence and she worked with a will. I can never forget her faithful, untiring care and economy. There was not such very hard work at first, but the service she gave me then money could never pay for. Most of the first work was sent to the house and sent for when finished, for you see, as I say, people were disposed to be kind. Then they were so delighted at the work which we turned out that they wanted to increase the prices they paid. Just imagine that!

"Now, when I look back to those days I realize that I must have been brave. But somehow I did not realize it at the time. I just felt thankful that I had been able to make out and I spent no time in repining over changed conditions. On the contrary I can say with truth that I found that work one of the greatest antidotes for my sorrows. When people come to me who are in trouble nowadays I always advise them to get at work at something that will interest them. Even when they complain of ill health, sometimes, I advise them to find occupation which may keep their minds off the trouble. Sometimes they do not understand, for they have not had my experience; but I know that I should have been overwhelmed if I had not just forgotten everything in the task I had in hand. By degrees I went in the kitchen and

studied the manner in which Martha did her work, for I confess I knew nothing of the practical side of it. I did make the things look pretty by tying them in separate bundles with dainty ribbon and pulling out fine lace so the pattern showed, and all this proved an excellent advertisement and made me many new customers. No one objected to paying more for good work of this kind. Then Martha had a method of doing up fine handkerchiefs, dipping them in very thin, cold starch before ironing, which made them look like new handkerchiefs each time they were washed. Soon we found ourselves famous in a small and select circle of customers—too famous, as it proved, for we encountered our first difficulty, that of obtaining trustworthy help to meet the increased work. After a year we moved and had a real laundry fitted up, and three years later we could have chosen associates from any number of people anxious to put money in the venture. So it has grown, and Martha is dead now, and I never go to the laundries at all, for I have managers and hundreds of employees. But I often wonder why more women do not take up the work in this high-class way, of course, making it, so to speak, a society laundry."

OPPORTUNITIES FOR WOMEN

Bee-keeping for Profit

AMERICAN women, says the New York "Sun," are taking kindly to bee-keeping, and each year more of them engage in the pursuit. Few of them have gone into the business with the idea of making much out of it. One woman wanted something to interest her as an offset to housework. Another needed some light outdoor occupation for health's sake. A third yearned for a little more pin money than came her way. Occasionally a woman approached the busy bee in a spirit purely scientific. But there's a fascination in bees, if one has the pluck to get past the fearsome stage, and if one likes the work at all, one becomes an enthusiast. In almost every case a woman's one colony of bees grows to at least a dozen, and there's no reason why, if she likes the work, a woman cannot manage a score of hives as well as one. One woman, beginning with a single colony, has raised the number to five hundred and is carrying on a big business as a dealer in bees, honey, and apiary appliances. A Texas woman is the most successful and prosperous breeder of queen bees in the country. A woman who had been for years an invalid and was advised to set up a hive of bees in order to furnish herself with a healthful out-of-door occupation, now manages one hundred and eighty hives from which, in one record-breaking year, she took 39,000 pounds of honey. What is more to the purpose, she has entirely regained her health.

These, however, are exceptional records. It is no easy

thing to make a good living by bee-keeping, and if the business is done on a scale large enough to accomplish that end, it means an immense amount of hard work and responsibility for man or woman. But as for adding a comfortable little sum to one's pocket money, at an inconsiderable cost in capital and hard work, that's another thing. Very little capital is needed for a modest start. Ten dollars will launch an aspiring bee-keeper very comfortably. If she overcomes the first difficulties she may increase her investment in hives and appliances later, but one colony will keep her busy at first and furnish her ample opportunity for study and experiment.

Probably there never lived a woman bee-keeper who didn't begin with fear of being stung. Some women never get over that fear. If they don't they would better abandon bees and go in for Belgian hares or poultry. The woman who can conquer her shudders and face a bee like a heroine has a future in the business. With experience comes a knowledge of the ways in which one can avoid stings; and, too, after a certain number of stings, the bee-keeper becomes practically immune, so far as painful or serious results are concerned. After the women who are afraid are dropped, the women who are not interested must be sifted out. No one who doesn't find bees absorbingly interesting has the spirit of the successful apiarist.

The bee-keeper who succeeds must have infinite patience, infinite capacity for detail, must be willing to study her bees closely, note every smallest thing concerning them, know their slightest tastes and whims. Bee-keeping is a wonderful thing for cultivating one's powers of observation. There is no end to the information one can gain by bee study. The bee-keeper foreordained is voracious in this matter of information. She not only observes and watches, but she reads, reads, reads. There is a bigger supply of bee literature than the uninitiated would imagine. Scientists have devoted volume after volume to the honey-maker. Practical bee-keepers have written weighty treatises. Poets like Maeterlinck have mixed fact and fancy in a fashion to drive

the ordinary prosaic bee-man into hopeless bewilderment. As a matter of mere entertainment there is no hobby equal to bee-keeping. There are people who appreciate that fact and tend their beehives from sheer love of the occupation and with no thought of sordid profit. One wealthy New York woman who spends her summers in Connecticut has ten hives of bees on her country place and says that she is more eager to get back to them than to anything else the country has to offer her. As a matter of fact, it was she whose enthusiasm inspired this story. She has reached the point where bees become a mania. Say "bee" to her and she hums and buzzes.

"I used to hate our country place," she said. "It is real country, you know, and dull beyond words. I like trees, and fields, and all that. I'm not like—South, was it? or Hunt?—who said that if he had to live in the country he'd pave the road in front of his house and hire a man to drive a hansom cab up and down on it. But I do like a little human interest with my bucolics. My husband wasn't with us much of the time. I had the children, but they were off playing all day long, and then I don't always find my own children absorbingly entertaining, as some good mothers do. I was unutterably bored a good deal of the time during the summer until I got my bees. Now I don't know what it is to put in a stupid day up there. My gardener proposed the scheme. I puttered round the garden a good deal, but the flowers weren't alive. I wanted live things to work with. In a burst of confidence I told Sam so. He suggested chickens. I hate the silly, cackling things. Then he advised bees. He had kept bees himself and said they were a good deal like folks, only a heap more knowing and hard-working. I liked the idea. Sam got the bees and installed them in the hive. Then I went around shrieking and saying 'shoo' and sucking my fingers for a week or two, but I stuck it out until I stopped being afraid, and after that I wouldn't have parted with those bees for a diamond tiara.

"Of all fascinating things in the world studying bees is the most fascinating. There is always something new to

learn and something worth while. My little girl helps me now, and she's as crazy about the bees as I am. We've learned so much about the flowers and plants, too, and we've had the most wildly exciting scenes and casualties. Do you know that we produce over 100,000,000 pounds of honey in the United States every year? It is worth over $10,000,000, and the wax product is worth about $7,000,000 more. Sounds big, doesn't it? I've been out over the bee ranches in Southern California. That's where they do the big business. The bees feed on sage there and store an incredible amount of honey. They say one colony of Italian bees will sometimes store 1,000 pounds of sage honey in one year. I'd rather run a California bee ranch than do anything else I know of. No, that's not true. I'd hate the hard work of so big an undertaking. I'd rather live out there in the beautiful mountains and keep just enough bees to entertain me without entailing a great amount of labor and bother about the business end of the thing. Since I can't do that, I just go on keeping a few bees in Connecticut. The small profits go to Sam, the gardener.

"I don't see why every farmer's wife or villager's wife doesn't set up a few beehives. I don't know anything that yields so large profit for as little capital and work. And I'd advise women to whom the pin money isn't any inducement to try bees for nerves and depression and *ennui*. I believe one beehive would do more to ward off or cure nervous prostration than all the medicine doctors could give. The open-air work and the intense interest are good for mind and body. I'd like to take away all my friends' lapdogs and Angora cats and substitute bees. It would reform society."

OPPORTUNITIES FOR WOMEN

Various Opportunities and Suggestions

By OLIVER H. G. LEIGH

THE wide-awake young woman can hardly glance through her morning paper without receiving suggestions and stimulus if she is on the lookout for occupation, on or off the beaten tracks. Many a happy venture has grown out of some accidental circumstance. A friend intrusts you with a little commission, shopping, or inspecting a house or apartment, or such like matters. You learn something that strikes you as an opening for offering your leisure hour services to other friends. Your suggestion is well received, it saves them time and trouble, and they are glad to serve you in turn if you are in a position to welcome such aids to a modest income. It depends on yourself whether the small beginnings thus made expand into a profitable venture or die out.

There are two sisters in New York who in partnership have built up a flourishing business in real estate. They are actively interested in every kind of operation. A young Englishwoman invented the unique profession of finding and buying every conceivable thing for which there is an inquiry, mostly the things which nobody is able to help one to find. She gets orders from every corner of the earth, and seems to have omniscient agents there too. A remarkable and lucrative business has been established on this happy thought.

A young widow was left in straitened circumstances.

A friend suggested to a publishing house that gift cards and bookmarkers made of the then new material, ivory celluloid, might become popular if artistically painted. An experimental package was sent to the lady; one of her designs won her a run of work which lasted three years. Some little device, trifling enough as it may seem at the moment, may in this way prove at least a stepping-stone to very pleasant and profitable occupation. True, almost every sort of home work is done nowadays in large cities on the wholesale sweatshop system, but there is always an opening for better or out-of-the-common productions if pains are taken to find it.

In the line of special domestic work many ingenious money-earning schemes have originated with clever girls. Hairdressing, happy touches in giving an evening dress a distinction of its own, novel modes of giving children an hour's diversion or exercise, the adornment of rooms on individual lines, these and other notions are as marketable now as ever. There is this great advantage in establishing relations of this kind with well-to-do families of refinement: you enlarge your circle and multiply your opportunities of advancement along more paths than the main one. An agreeable, helpful, unassuming young woman will win friendships worth infinitely more than high salaries in quarters where she is only a part of a huge machine.

For girls who can philosophically weigh the ups and downs of life as it is, no apology is needed to gild the suggestion that there is many a worse lot for a good girl than domestic service. False notions have done quite as much to discredit this honorable calling as the meannesses of upstart mistresses. Sentimentally there is great beauty in the picture of beaming old couples ending their days in happy comfort, having grown old in lifelong service with families who for two generations have regarded and treated their domestics as trusty friends, as they so often are in the largest sense. We have known a great number of such cases. Where the girl is fortunate enough to place herself with a "good family," it is her own fault if she has not a lady's

life of it, with compensations that more than offset the supposed drudgeries and confinement. It is probably hopeless to expect that the average girl who reads this will tolerate the bare suggestion of domestic service, but for the one brave venturer out of the thousand, there is somewhere waiting for her an ideal home, duties that ought to be more congenial than those of warehouse, office, or store, an income larger, because less subject to drains and supplemented in various ways, than city wages, and, best of all, the companionship of sympathetic and constant friends.

Girls ingenious with their embroidery needles, paint brushes, or wood carving tools should set about devising mottoes, fancy ornamentations, or what not, suitable for adding the value of a personal association to birthday, wedding, and other gifts. Any one can buy presents, but not every one is able to stamp them with originality and special appropriateness, as now suggested.

The office of "companion" to invalid, elderly, or traveling persons is not a sure and certain source of worldly bliss. When congenial relations exist the occupation may be an ideal one. There have been instances of young women, good angels by nature, who have been very successful as reading companions for an hour or two daily, and children's companion in the nursery, and out of doors, a welcome relief to both the children and their nurses.

In some places young women have made themselves very useful as organizers of amateur entertainments. Church and society festivals can be lifted to higher levels of merit and attractiveness by the application of ingenuity, observation, and good taste, and whoever brings these qualities to bear on the work which cheers life and promotes good-fellowship and practical helpfulness will not fail of the reward so well earned.

To judge by advertisements, there is hardly a conceivable fad that has not its "professors" in full mercantile swing. Still, there are many people, probably a majority of the more desirable kind, who would prefer to employ the services of a private, ladylike person in the hundred services

to be rendered in this wide field. It is not necessary to indicate them. In a broad sense it may be taken for granted that an agreeable girl, with brain, polished manner, and handy ways, will be more welcome to those requiring such services than the average hired advertiser, especially if recommended by good patrons.

Families sojourning in their country homes might be glad to know of capable young women, living in the chief city of their state, on whom they might rely to look after their interests, such as concern house affairs, the choosing of goods at stores, or communicating with city friends.

There is at least one firm of auditors and accountants in New York whose principals are women. Many of the smaller retail stores, especially in towns, do not employ an auditor, and some do no bookkeeping. One young woman known to the writer worked up a satisfactory business by making a periodical round of bookkeeping and auditing visits among the traders within twenty-five miles of her home.

Another insisted on her father, a doctor and druggist, allowing her to study pharmacy. She passed with honors and was a trusty filler of prescriptions in the store, besides giving valuable assistance in many ways in the doctor's large practice.

A new vocation for women was suggested a few years ago by an eminent man. This was what it might be too formidable to call scientific gardening—the hybridizing, grafting, and budding of plants, the training of fruit trees and flowers. Whether this has been pursued as an occupation by women to any considerable extent we are not aware, but it would appear to yield tempting opportunities, and what could be more charming than nursery work with flowers for children?